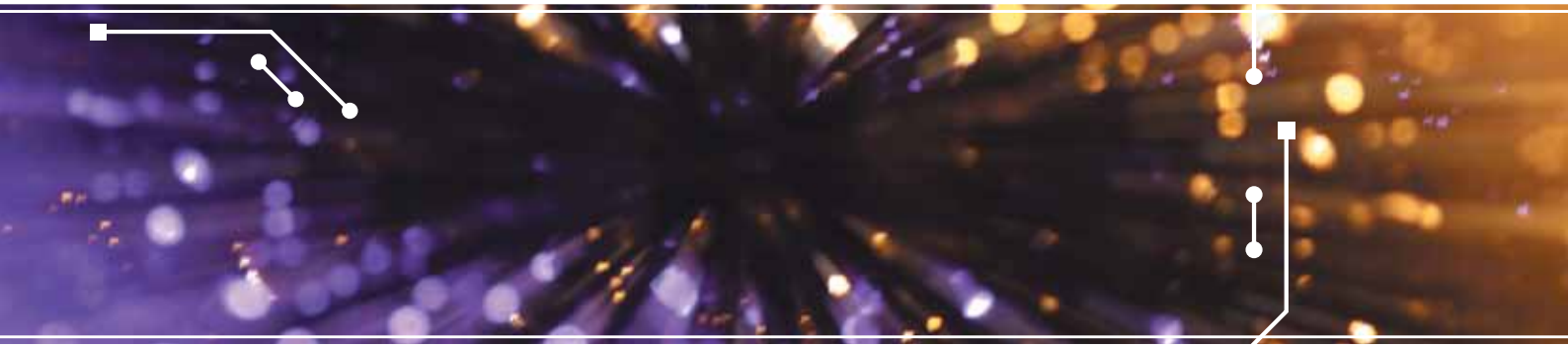
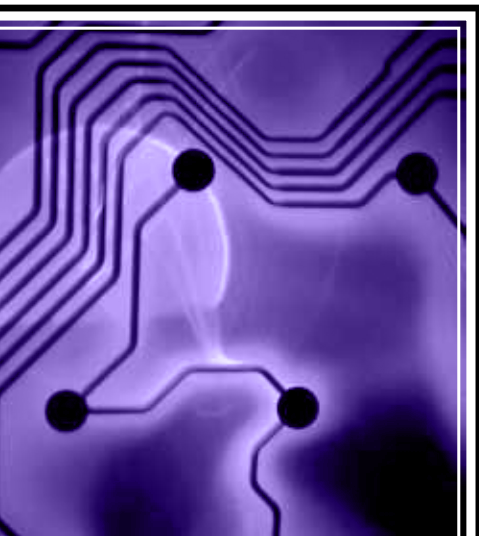
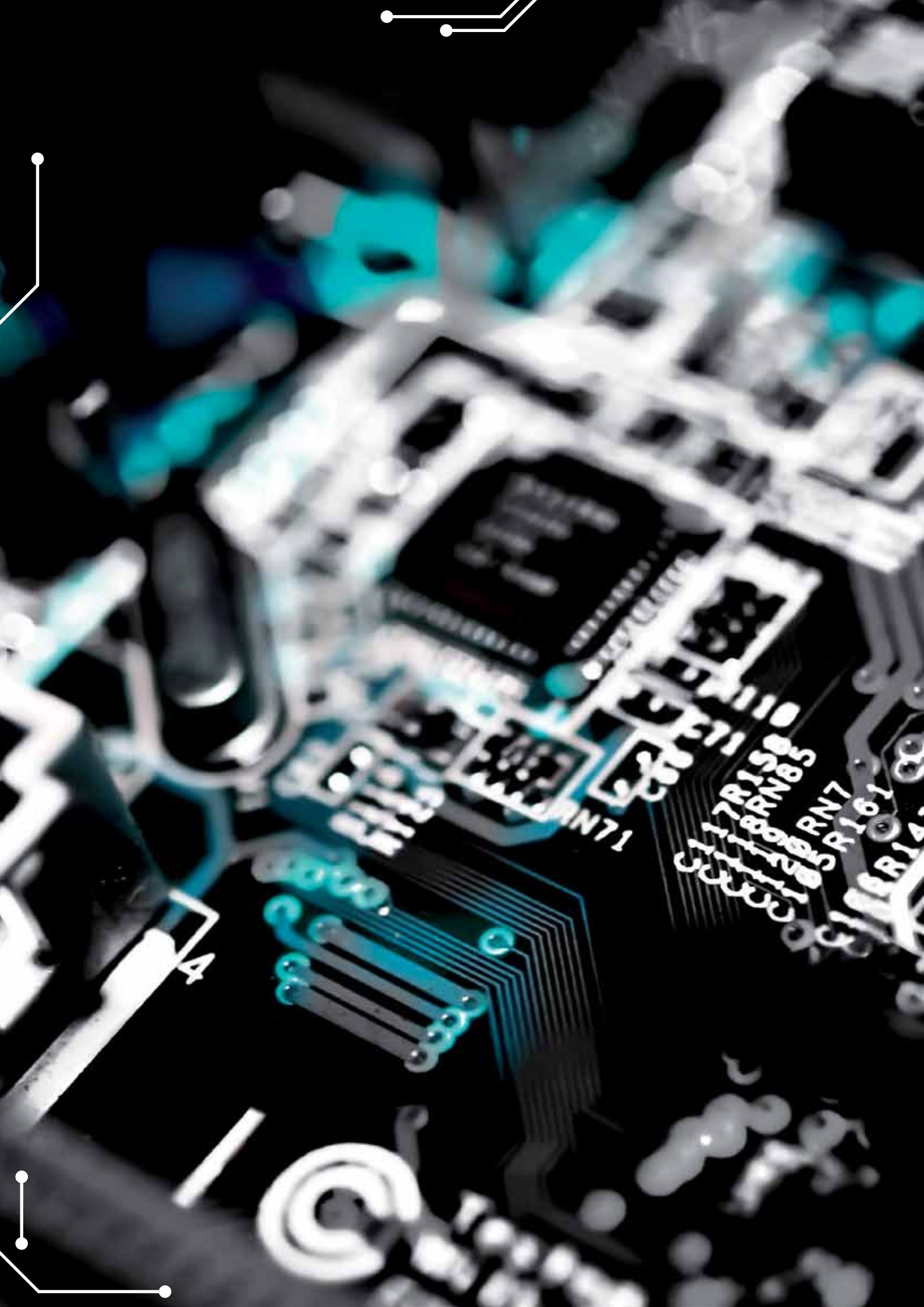
velleman®
projects





kits
modules
instruments
catalogue



velleman® projects

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Instruments p.42-45

Coming soon..... p.46

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Key

View Demo Watch a demo-movie on Youtube™. Enter the article code into the search field.

Level of difficulty

Along with each product, an indication of the level of difficulty of the soldering work is given. When no level is indicated, no soldering is required.

Starter:	Hobbyist:	Advanced:	Master:	Expert:	No soldering required:
★ Ordercode	★★ Ordercode	★★★ Ordercode	★★★★ Ordercode	★★★★★ Ordercode	Ordercode

References

****VERSION ref.: page-nr.

These symbols indicate that a certain products also exist in a different version.

Mini kits
For those who want to take their first steps into this magnificent hobby. For these kits a battery is usually sufficient to reach stunning results.

ex. MINI KIT VERSION MK138: p12

Kits
The regular kits usually require a bit more connecting and installation knowledge.

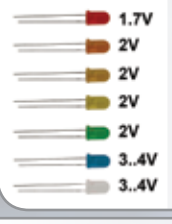
ex. KIT VERSION K8060: p16

Modules
The module versions are pre-mounted and tested and require no soldering.

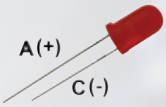
ex. MODULE VERSION VM136: p41

Tips & tricks

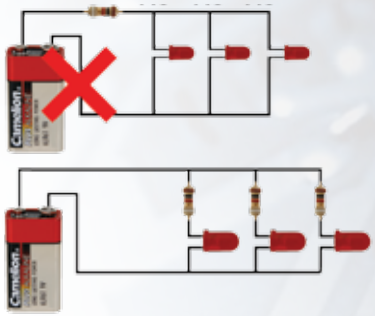
LEDs and how to use them



LEDs feature a specific voltage drop, depending on type and colour.
Check the datasheet for exact voltage drop and rated current!



Never connect LEDs in parallel!



How to calculate the series resistor:

Example: operate a red LED (1.7V) on a 9Vdc source.
Required LED current for full brightness: 5mA (this can be found in the datasheet of the LED)

$$\frac{\text{Supply voltage (V) - LED voltage (V)}}{\text{required current (A)}} = \text{series resistance (Ohm)}$$

$$\rightarrow \frac{9V - 1.7V}{0.005A} = 1460\ \text{Ohm}$$

closest value:
use a 1k5 resistor

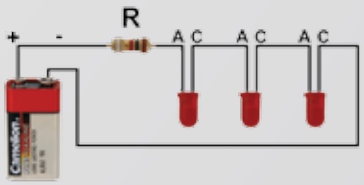
Required resistor power handling =
voltage over resistor x current passed trough resistor

$\rightarrow$ (9V-1.7V) x 0.005A = 0.036W

a standard ¼ W
resistor will do the job

LEDs in series:

Example:
- 3 x red LED (1.7V) on 9V battery
- Required LED current for full brightness: 5mA (this can be found in the datasheet of the LED)



$$\frac{\text{Supply voltage (V) - (number of LEDs x LED voltage (V))}}{\text{required current (A)}} = \text{series resistance (Ohm)}$$

$$\rightarrow \frac{9V - (3 \times 1.7V)}{0.005A} = 780\ \text{Ohm}$$

use an
820 Ohm resistor

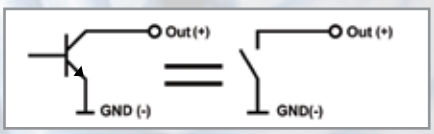
Power LEDs dos and don'ts

Screw the LED firmly onto an appropriate heat sink
Use a series resistor or a current limiter circuit

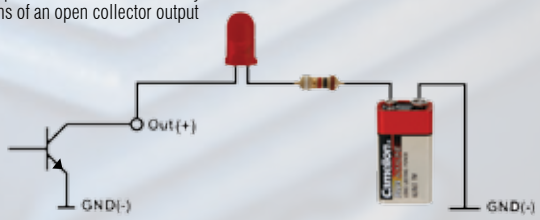
Use the LED without a heat sink!
Use the LED beyond maximum operating current
Look directly into the light source

Open collector outputs

An open collector output can be compared to a switch that switches to ground when powered.

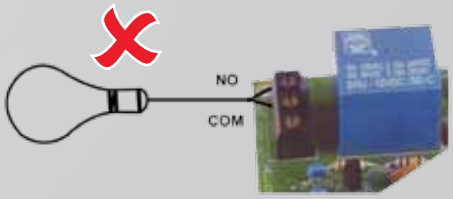


Example: How to switch an LED by means of an open collector output



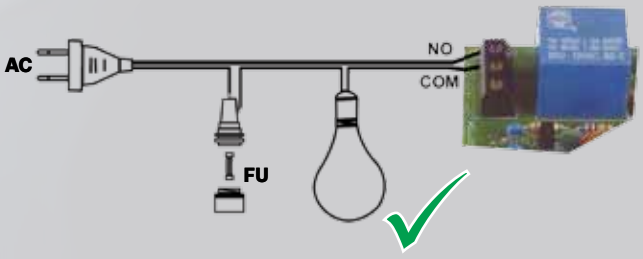
Relay contacts and how to use them

Common mistake:



Remember: relay outputs are switches meaning there is no voltage coming out of them.
An external source is required.

So how to connect a load to a relay output:

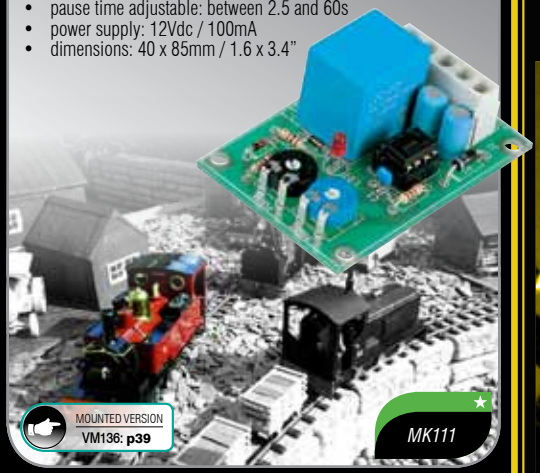


Mini kits

MK111 Interval timer

For intermittent operation of circuits and equipment.

- Blinking light, video/photo single frame shooting, slide projector control, miniature models.
- output relay with dry switch-over contact: 3A/24V
- pulse time adjustable: between 0.5 and 5s
- pause time adjustable: between 2.5 and 60s
- power supply: 12Vdc / 100mA
- dimensions: 40 x 85mm / 1.6 x 3.4”



MOUNTED VERSION VM136: p39

MK111

DIGITAL ECHO CHAMBER

MK182

Great effect tool - tool - tool - tool!!
Can be used for various audio systems, karaoke, P.A., toys, or just for fun...

- 4 Adjustments for MIC or input level, volume or output level, echo delay time, and feedback.. 40 Kb SRAM for low distortion and good sound quality. onboard microphone and audio amplifier. line-In & Line-out connection. 9V battery snap included
- power supply: 9V battery (6LR61 not incl.) or 9...12V DC regulated
- power consumption: 150mA max.
- delay time: 80…200ms
- speaker output: 500mW (8 ohm, 10% THD)
- dimensions: 85 x 70 x 20mm / 3.35 x 2.76 x 0.78”

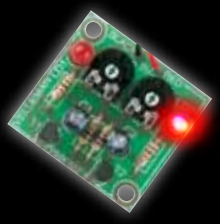
ONBOARD MICROPHONE AND AUDIO AMPLIFIER

MK182

MK102 Flashing leds

Suited for different applications (e.g. model construction) and also educational.

- Adjustable flashing speed with two potentiometers.
- consumption: ca. 8mA
- power supply: 9V battery (not incl.)
- dimensions: 33 x 32 x 15mm / 1.3 x 1.25 x 0.6”



MK102

MK107 Led running light

8 LEDs.

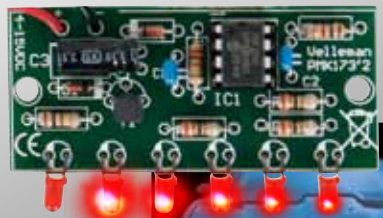
- Different LED running effects are selectable (PROG push button).
- Adjustable effect speed (SPEED potentiometer).
- Push button for power stand-by (OFF push button).
- power supply: 9V battery (not incl.)
- dimensions: 95 x 40mm / 3.5 x 1.6”

MK107

MK173 Mini-6-led chaser

1 LED scans from side to side or in 1 direction (selectable). as attention grabber in stores, at exibitions, etc.... as seen in classic TV series.... applications: . toys. scale and RC models. as gadget. for stage, plays, movies, etc.... 6 high-intensity 3mm red leds
power supply: 4-15VDC (20mA at 12VDC)

- fixed scan speed (side to side): 0.5s
- dimensions: 55x25x10mm / 2.18 x 0.99 x 0.39”



MK173

MK148 Dual super bright flashing red lights

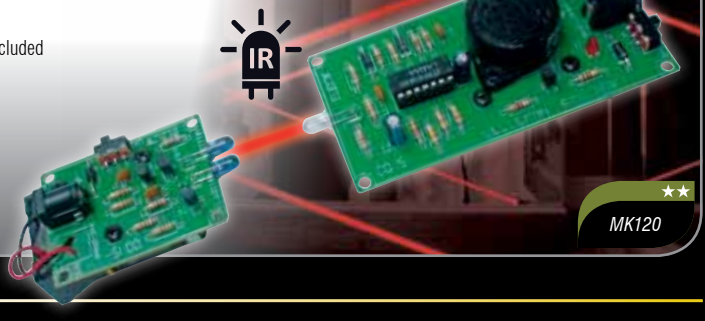
- two super bright red LEDs.
- very powerful flash effect.
- for emergencies, warning signs, as eye-catcher, ‘alarm-active’ - simulation, etc ....
- ‘Auto turn-on at dark’ - mode with adjustable sensitivity.
- on/off switch
- power supply: 9V battery (not incl.) (12V possible)
- dimensions: 55 x 32 x 40mm / 2.2 x 1.3 x 1.6”

MK148

MK120 IR light barrier

Applications : announce visitors, warn against burglars, set boundaries, science projects...

- audible (85dB) and visible (LED) alert
- range: 1 to 4m (3.3ft to 13ft)
- on/off switch provided
- power supply:
- transmitter: 9VDC / 50mA max.
- receiver: 9VDC / 20mA max.
- 9V battery holder and adapter jack included
- dimensions:
- transmitter: 55 x 40mm / 2.2 x 1.6”
- receiver: 100 x 50mm / 3.9 x 2.0”
- not recommended for outdoor use



MK120

MINIKITS STARTER SET

MKSET1

contains: . MK101. MK102. MK109. MK113. MK120. MK127.
- with hanger

6 in 1

MKSET1

K/START Soldering starter kit - renewed version

contains: . soldering iron (230Vac): VTSC30N1. solder: SOLDERDISPLF. soldering iron holder: STANDLC. pair of wire-cutters: VT057. flashing LEDs: MK102. LED light organ: MK103

K/START

Ideal for the beginning hobbyist

MK180 Two-channel hi-power led flasher

Use the unit with any kind of LEDs: low current, hi-power, LED strips, clusters, etc.
- two channels.
- 7 flash effects. adjustable speed. detachable LED PCBs. high-power MOSFET outputs: (3A/channel). memory for last selected effect. supplied with 20.000mcd white LEDs. single-button selection. applications: alarm systems, hazard flasher, attention grabber, disco effect, etc.
- supply voltage: 12VDC
- outputs: 3A/Channel max.
- dimensions:
- main board:
- l x w: 65x33mm / 2.56x1.3"
- height: 20mm / 0.78"
- LED board:
- l x w: 18x33mm / 0.71x1.3"
- height: 12mm / 0.47"

MK180

MK178 3rd brake light flasher

Works on every car with a third brake light, with either LEDs or incandescent bulbs. Check with local authorities if the use of this device is allowed in your country. Easy two-step install. makes your 3rd brake light flash. selectable number of flashes: 5 or 10 times. selectable flash repeat interval: always or not within 5-7sec between two brakes. includes shrink tube to cover complete unit.
- flash frequency: 7 times per second
- power supply: 12VDC
- max load: 4A
- dimensions: +/- 60x30x20mm/2.4x1.2x0.8"

MK178

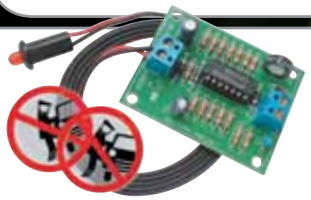
MK181 Ac power voltage led

Note: only for use inside a cabinet
- blue LED operated on mains voltage.
- suited for mains indicator or other pilot lamps.
- for safety guidance, stairs, corridors…. small in size!.
- special X2 safety capacitor
- supply from: 100Vac to 240Vac 50Hz or 60Hz
- dimensions: 28x18mm / 1.10 x 0.71"

MK181

MK189 12u car battery monitor

This small circuit is of great value to check you car battery status. (enclosure not included!)
- easy to build in.
- only 2 wires to connect (connect after ignition).
- includes: board to wire connector
- dimensions: 30x20mm / 1.18 x 0.78" (board)



MK126 Car alarm simulator

LED with realistic flash sequence simulates active car alarm system.
activates automatically when the engine is turned off. easy installation with two wires. adjustable sensitivity
low current consumption: 12mA max. (12V only)
- comes complete with prewired LED holder and two warning labels
- dimensions: 57 x 45mm / 2.3 x 1.8"

MK126

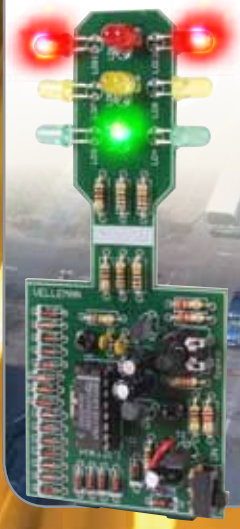
MK168 Alarm sensor simulator

Scare off possible intruders with this low-cost alarm simulator.
'Realistic'- looking flash sequence. runs for months on a single AA battery. complete with enclosure and fixation strip. wall mounted or desk-top operation. applications: protect homes, shops,cars, cabins, trailers, boats, equipment,…
- power supply: 1.5V AA battery (not incl.)
- power consumption: 20µA idle, 3mA when flashing
- dimensions: 80x55x33mm / 3.15 x 2.2 x 1.3"

MK168

MK131 Traffic light

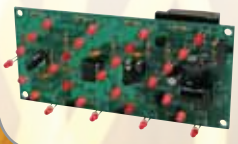
Miniature traffic light as used on four-way junctions.
- Realistic operation with adjustable delay.
- 12 LEDs.
- Great for model railroads, exhibitions, as a toy...
- low power consumption: 15mA
- power supply: 9V battery (not incl.)
- ON/OFF switch
- dimensions: 50 x 35 x 115mm / 2 x 1.4 x 4.5"



MK131

MK176 Led cheuron arrow

This chevron type arrow features different animations.
- Rolling, scrolling, inverse scrolling, blinking, partial blinking etc… Great for indication purposes or advertisement and attention grabber.
- 28 bright 3mm RED LED's
- power supply: 9 to15Vdc or 9V battery (not included)
- current consumption: 10 to 40mA @ 9V
- dimensions: 64wx130hx16d mm (ex bat) / 2.5 x 5.12 x 0.63"

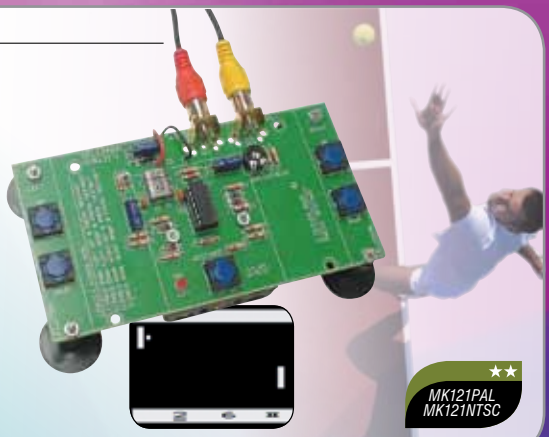


MK176

Tu tennis game • Available PAL or NTSC

MK121PAL
MK121NTSC

One player mode : four difficulty levels, hold one of the move buttons then press RESTART to select a level.
- Two player mode : press RESTART.
- Press both move buttons to "smash" or to start your serve.
- Only the server can score points.



★★ MK121PAL MK121NTSC

Brain game

MK112 without enclosure
MK159 enclosure included

Just 4 LEDs and 4 push buttons provide hours of fun.
- The object of the game is to repeat a randomly generated pattern.
- The pattern is played both visually and audible or visually only (selectable).
- It features 4 difficulty levels, which can be selected at start-up.
- The replay speed gradually increases during the game, to make it even more challenging.
- Low power consumption.
- Microprocessor-controlled.
- Auto power off.
- power supply: 3 x 1.5V AA batteries (not incl.)
- dimensions: 50 x 65mm / 2.0 x 2.6"

★ MK112 | MK159

MK112 | MK159

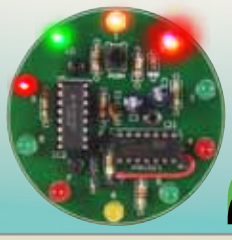
MK133 Quiz table

Up to four players can compete.
- LED indicates first button pushed.
- Quizmaster 'RESET' -button with 'button pushed'-indication.
- Two units can be daisy-chained for eight-player-fun !
- with on/off switch
- power supply: 9V battery (not included)
- dimensions: 110 x 78 x 28mm / 4.3 x 3.1 x 1.1"

★★ MK133

MK152 Spinning led wheel

10-LED spinning wheel. push the button to start spinning action. spinning speed gradually decreases. finally it stops and one LED remains lit. auto power-off. low power consumption
- power supply: 9V battery (not incl.)
- dimensions: Ø64 x 33mm / Ø2.6 x 1.3"



★ MK152

MK119 Roulette

37 LEDs.
- Spinning sound.
- 'Winner'-tune for each colour.
- Spins LEDs between games.
- Push-button operation.
- Microprocessor technology.
- auto power-off
- low power consumption
- power supply: 3 x AA battery operation (not incl.)
- dimensions: Ø91 x 33mm / Ø3.6 x 1.3"

★ MK119

MK109 Electronic dice

Electronic dice with LED indication.
- Slowly rolls to a stop when the push button is released.
- power supply: 9V battery (not incl.)
- dimensions: 42 x 60mm / 1.7 x 2.4"

★ MK109

MK150 Shaking dice

no push buttons required, just give it a shake. slowly rolls to a stop and flashes the last combination. microprocessor-controlled. auto power-off
power supply: 3V-battery (CR2025 or CR2032) (not incl.)
- dimensions: 36 x 36 x 32mm / 1.4 x 1.4 x 1.3"

★ MK150

SMD-TECHNOLOGY
SURFACE MOUNTED DEVICES

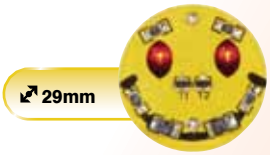
SMD components are very small and usually very hard to solder with a regular soldering iron.
Make sure to have a magnifier and a pair of tweezers ready.
But don't worry, we have thought of you and provided some spare components in case some get lost or damaged from soldering.

- Works on a Lithium button cell (not included)
- 6 alternatively flashing SMD LEDs
- Take your first steps into the SMD-world with this small kit
- Draw attention

MK141 SMD happy face

mini gadget. 2 LEDs flash alternately. great as attention grabber.
power supply: 3V Li button cell (e.g. CR2025 or CR2032)

- dimensions: Ø29 x 8mm / Ø1.1 x 0.3"

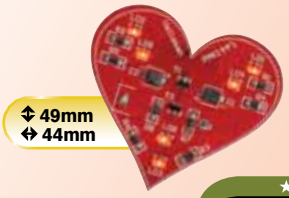


★★ MK141

MK144 SMD flashing heart

mini gadget. 6 LEDs flash alternately. can be operated pending (e.g. around the neck) or can be worn as a badge (pin supplied).

- dimensions: 49 x 44 x 8mm / 1.9 x 1.7 x 0.3"



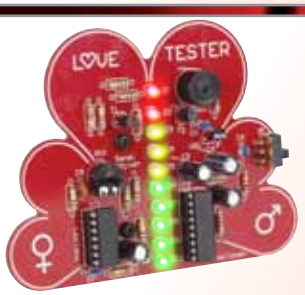
★★ MK144

MK142 SMD x-mas tree

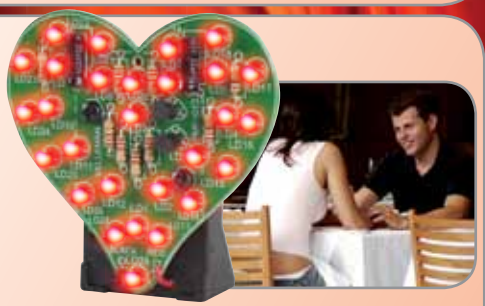
miniature Xmas gadget. 6 LEDs flash alternately. tree can be operated pending (e.g. from the ceiling or Xmas tree) or can be worn as a badge (pin supplied). great attention grabber.

- dimensions: 45 x 41 x 8mm / 1.75 x 1.6 x 0.3"

★★ MK142



View Demo



MK175 Animated led smiley

choice of expressions to suit every mood!. choose between static or animated expressions. great as desktop mood indicator or attention grabber. complete with enclosure. On/off/expression select button at the back. Auto power-off: ± 1 hour
power supply: 3x AAA battery, ex. LR03

- power consumption: 15mA
- dimensions: 75x75x32mm / 3 x 3 x 1.28"

75mm ★★ MK175

MK149 Love tester

check your love life !. each partner holds one end of the PCB, then they join hands, watch the meter go .... great fun at parties, among friends, etc.... 10-LED readout plus audible 'love-level'-indication. flashing LEDs indicate you're a red-hot lover. wide sensitivity range covers the entire spectrum, from cool to a steaming Latin lover!.
power switch included
power supply: 9V battery (not incl.)

- dimensions: 105 x 80 x 25mm / 4.1 x 3.1 x 0.98"

★★ MK149

MK101 Flashing led sweethearts

Show your sweetheart in an original way that your heart still beats for him or her.

- 28 LEDs form 2 blinking hearts.

consumption: ca. 8mA

- power supply: 9V battery (not incl.)
- dimensions: 65 x 70 x 30mm / 2.5 x 2.75 x 1.2"

★ MK101

BUG WORLD

Attractive bug-shaped miniature robot.

- The microbug is always hungry for light and heads towards it.
- two open-chassis subminiature motors. adjustable light sensitivity suits almost any light intensity and makes it possible to control its 'bug-like' behaviour. adjustable speed. choice of two different walks. LED 'eyes' indicate driving direction. stops in total darkness
- power supply: 2 x 1.5V AAA batteries (not incl.)
- dimensions: 130 x 90 x 50mm / 5.2 x 3.5 x 2.0"

MK127 Running microbug

★★ MK127

MK165 Crawling microbug - with enclosure

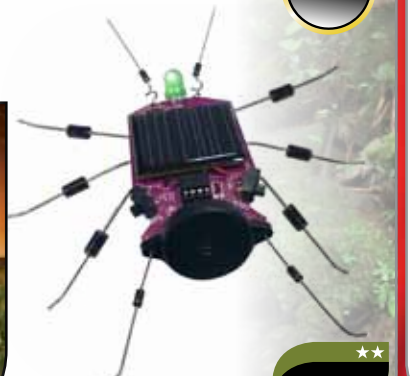
★★ MK165

MK129 Crawling microbug

★★ MK129

MK185 Solar bug

Bring that mediterranean atmosphere to your garden. Chirps or glows as long as the sun shines.*realistic cricket chirp. slow fading green led simulates glow-worm. solar cell: 4.5V/ 35mA



★★ MK185

MK104 Electronic cricket

Can be used for recreational purposes or to simulate a hot summer night.

- Automatically comes on when darkness falls.
- Cricket repetition (time between two crickets), effect and tone are adjustable.
- Adjustable light sensitivity.
- consumption: ± 5mA
- power supply: 9V battery (not incl.)
- dimensions: 41 x 56 x 25mm / 1.6 x 2.2 x 0.98"

★★ MK104

MK135 Electronic decision maker

Helps making difficult YES or NO decisions.

- Ideal for the indecisive.
- Simply push the button to start flashing of YES/NO LEDs.
- Flashing speed gradually decreases and finally one LED remains lit.
- low power consumption: 1µA idle / 8mA in-use
- auto power-off
- power supply: 9V battery operated (not incl.)
- dimensions: 55 x 30 x 35mm / 2.2 x 1.2 x 1.4"

★★ MK135

MINIKITS STARTER SET

MKSET2

- contains: .. MK100 : electronic christmas tree. MK101: flashing LED sweetheart. MK130 : 3D Xmas tree. MK167 : electronic candle. MK169R : flashing red LED star. with hanger

6-IN-1
MKSET2

MK100 Electronic christmas tree

Christmas has never been this cosy ! 16 blinking LEDs.
also available in mounted version: MMK100
very low power consumption: max. 4mA

- power supply: 9V battery (not incl.)
- dimensions: 60 x 100 x 25mm / 2.4 x 4.0 x 1.0”

MK100

MK130 3d xmas tree

The ultimate Xmas gadget.
16 flashing red LEDs. extra green and yellow LEDs provided to customise your tree. can be hung on and fed through wires
low power consumption: 8mA

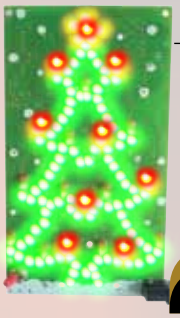
- power supply: 9V battery operation (not incl.)
- will operate on 12VDC (e.g. in cars, ...)
- dimensions: 80 x 88 x 102mm / 3.1 x 3.5 x 4”
- Battery not included

MK130

MK117 De luxe xmas tree

Beautiful tree consisting of 134 LEDs.

- 18 randomly blinking candles.
- No need to remove battery when using external supply.
- 12V operation possible for use in cars, vans, trucks.
- On/off switch included.
- also available in mounted version: MMK117
- power supply: 9 to 12VDC or 9V alkaline battery (not incl.)
- recommended adapter: PS905
- dimensions: 143 x 81mm / 5.6 x 3.2”



MK117

MK183 USB smd x-mas tree

The perfect SMD kit for the Christmas holidays. Easy to mount.
The ideal introduction to the SMD technology.
PC- or battery-powered.

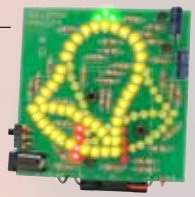
View Demo

MK183

MK122 Animated bell with 83 leds

No need to remove battery when using external supply.

- 12V operation possible for use in cars, lorries, trucks.
- On/off switch included.
- power supply: 9 to 12VDC adapter or 9V alkaline battery (not incl.)
- recommended adapter: PS1203
- dimensions: 87 x 84mm / 3.4 x 3.3”

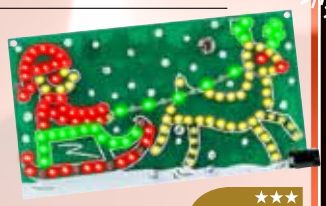


MK122

MK116 Riding santa

Animated Xmas gadget with 126 multicoloured LEDs.

- No need to remove battery when using external supply.
- 12V operation possible for use in cars, lorries, trucks.
- With on/off switch.
- power supply: 9 to 12VDC or 9V alkaline battery (not incl.)
- dimensions: 80 x 145mm / 3.2 x 5.7”
- recommended adapter: PS905



MK116

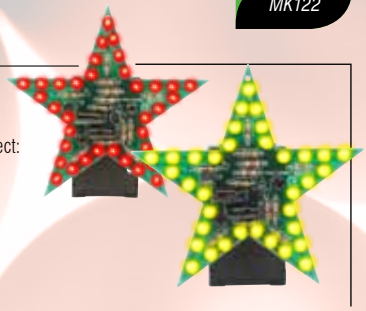
Flashing led star

MK169R
MK169Y

great seasonal gadget !. safe battery operation. select: flashing or static operation. application: desktop or hanging from the ceiling. multiple kits enhance the effect. in-car (12V) operation possible

35 LEDs

- power supply: 1x 9V battery (not incl.)
- current consumption: 40mA (static mode)
- flash duty cycle: 1:2
- dimensions: 90x90mm / 3.54 x 3.54”



MK169R
MK169Y

MK170 60-led multi-effect star

processor-controlled LED star creating multiple dazzling effects. extra LEDs included, allowing different colour combinations: make your own mix of red and yellow LED’s or make the star fully red or yellow. on-board effect selection push button. 24 effects. 3 static. 15 blinking. 6 animations with fading. “All effects” sequencing is possible (standard setting)

60 LEDs on board

- power supply: 9 to 12Vdc adapter or battery (not incl.)
- current consumption: 20mA (static mode 9V battery)
- dimensions: 105x110x35mm / 4.13 x 4.33 x 1.38”

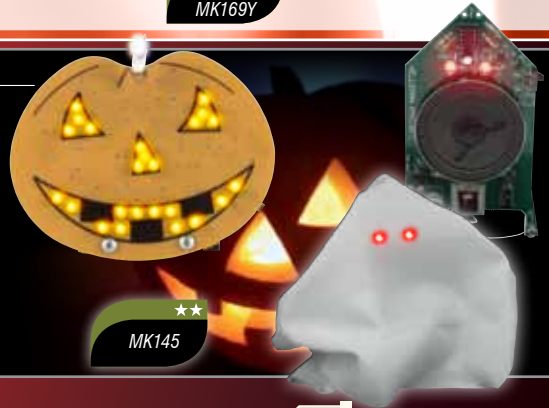
MK170

MK145 Halloween pumpkin

25-LED brightly-coloured Halloween pumpkin. random flash effect simulates flickering candle. 1 extra high intensity yellow LED illuminates the pumpkin. on/off switch

power supply: 9V battery (not incl.) / 20mA

- dimensions: 100 x 80 x 33mm / 4.0 x 3.2 x 1.3”



MK145

MK166 Animated ghost

great Halloween gadget. greets your visitors. for shops, parties, events or just for fun

ghost responds to sudden noises

- adjustable sensitivity
- battery operation: 2xAAA battery
- dimensions: 137x68x50mm / 5.39 x 2.68 x 1.97”

MK166

MK118 FM radio

double fun: building and listening!. easy to assemble: no coils to wind. one single adjustment. pre-assembled and tested FM front-end. receives the complete FM band: 88-108 MHz. with ON/OFF switch, volume control and LED indicator

power supply: 12VDC / 100mA (adapter jack provided)
- dimensions: 125 x 85mm (4.8" x 3.3")

MK118

MK136 Super stereo ear

Stereo audio amplifier boosts sound 50 times.
- Great for the-hearing impaired (e.g.
- when watching TV), as a gadget, science project, … With volume control and on/off switch.
- power supply: 3 x 1.5V AA batteries (not incl.)
- dimensions: 62 x 54 x 44mm / 2.4 x 2.1 x 1.7"

MK136

MK190 2x5w amplifier for mp3 player

- big sound from a small unit
- low distortion
- input: stereo 3.5mm jack
- volume adjust complete with attractive knob
- slide on/off switch
- blue indicator led
- speaker impedance: 4-32 ohm
- dimensions (wxdxh): 66x53x25mm / 2.59x2.08x0.98"

MK190

MK171 Voice changer

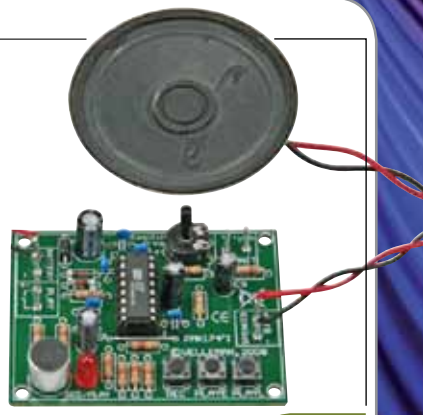
make your voice sound like a robot. add vibrato effect. use the 'pitch'-buttons and make your voice sound lower or higher. built-in microphone and power amplifier with volume control, just add a speaker. hours of fun!. for parties, plays, recordings, games, etc.
speaker / line output
- on/off switch
- max. output power: 1.5 W (4 ohm)
- power supply: 9Vdc / 300mA
- dimensions: 77 x 46 mm / 3 x 1.81"

MK171

MK174 Single-message record/playback project

record time between 10 and 35 sec. (adjust the sample rate). onboard microphone. speaker Ø 57mm included. line-out to drive external amplifier, e.g. for. K8066: 3W mono amplifier. K4001: 7W mono audio amplifier. .... external trigger input to play message. 3 x AA battery holder included. using the speed adjust a " funny voice" can be created

power supply: 4.5V battery (3 x AA not incl.), ex.LR6BL
- power consumption:
- max. 150mA during playback
- less than 1µA during standby!
- adjustable sampling rate: 5…12 KHz.
- speaker output: 500mW max., 8 ohm
- signal/Noise ratio: 34dB
- PCB dimensions: 65 x 50 x 20mm / 2.6 x 2 x 0.8"



MK174

MK140 Karaoke

sing along to your favourite music. hook-up the unit between your CD player, MD player or any other line-level source on the one hand and your amplifier on the other. RCA (cinch) input and output sockets. with 6.35mm microphone jack, fits most microphones. adjustable microphone level. "vocal reduction"-switch reduces original vocals on most stereo recordings. on/off switch and LED power indicator

power supply: 9V battery (not incl.)
- low power consumption: 16mA typ.
- dimensions: 100 x 84 x 25mm / 3.9 x 3.3 x 1.0"

MK140

MK106 Metronome

Speaker included.
- LED beat indication.
- Adjustable volume and beats/minute with potentiometers.
- On/off switch on board.
- power supply: 9V battery (not incl.)
- dimensions: 60 x 43mm / 2.4 x 1.7"

MK106

MK105 Signal generator

signal output: sine wave, triangle, square wave and integrator (selectable through jumper). signal frequency: about 1kHz (fixed). output level: adjustable from 0 to 100mVrms (LEVEL potentiometer)

power supply: 9V battery (not incl.)
- dimensions: 56 x 40mm / 2.2 x 1.6"

MK105

MK113 Siren sound generator

Generates 4 different sounds: police siren, fire brigade, emergency vehicle and laser gun.
- RV1 adjusts sound pitch.
- On/off switch and PCB speaker included.
- power supply: 9V battery (not incl.)
- dimensions: 60 x 40mm / 2.4 x 1.6"

MK113

MK134 Steam engine sound generator

Generates the sound of a vintage steam engine.
- Adjustable 'speed' and volume.
- Great for model railroads, radio plays, stage or as a gadget.
- With 'steam whistle'-push button.
- power supply: 9V battery (not incl.)
- comes with 8 ohm/0.5W miniature speaker
- dimensions: 100 x 83mm / 3.9 x 3.3"

MK134

MK132 Cable polarity checker

Check cables for continuity and identify individual wires.
- Perfect tool to check speaker cable polarity.
- LED indication for open circuit, shorts and correct or wrong polarity.
- Push-button operation with auto power off.
- low power consumption: 10mA max.
- power supply: 9V battery operated (not incl.)
- dimensions:
  - main board: 56 x 40 x 33mm / 2.2 x 1.6 x 1.3”
  - remote board: 40 x 7mm (1.6” x 0.3”)

MK132 ★★

MK147 Dual white led stroboscope

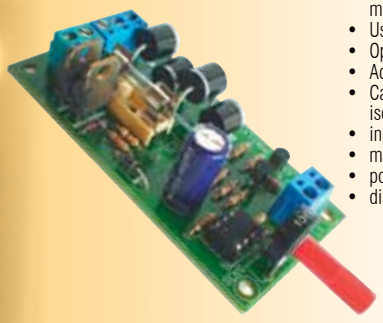
two super bright white LEDs. powerful flash effect. great for parties, scale models, as an attention grabber, to observe moving parts, etc.... slow/ fast selector and speed adjust trimmer. speed adjustable between approx. 1 and 60 flashes/ second. on/off switch

power supply: 9V battery (not incl.)
- power consumption: 40mA max.
- dimensions: 55 x 32 x 40mm / 2.2 x 1.3 x 1.6”

MK147 ★

MK114 Low voltage light organ

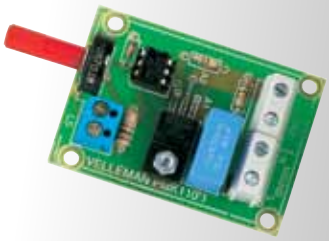
Operates at a safe voltage level.
- Makes lamps flash to the rhythm of the music.
- Usable for halogen bulbs.
- Optically isolated speaker input.
- Adjustable sensitivity.
- Can be used in the car if the lamps are isolated from the chassis.
- input sensitivity: 2W to 60W
- maximum load: 50W / 12V or 100W / 24V
- power supply: 12V to 24V DC or AC
- dimensions: 45 x 88mm / 1.8 x 3.5”



MK114 ★

MK110 Simple one channel light organ

With loudspeaker input.
- Modulates a lamp according to the music signal at the input.
- Optically isolated loudspeaker input.
- Adjustable sensitivity.
- input sensitivity: 2W to 60W
- maximum load: 120W at 120VAC and 230W at 230VAC
- dimensions: 60 x 41mm / 2.4 x 1.6”



MK110 ★★

MK115 Pocket uu meter

Surprise your friends in the disco.
- 5 red LEDs.
- Incorporated microphone.
- Adjustable sensitivity.
- power supply: 3V type CR2032 battery (not incl.)

MK115 ★

MK103 Sound-to-light unit

Four high-intensity LEDs light up and react simultaneously to every sound.
- For different funny and practical applications e.g.
- sound indicator, simple sound-to-light unit for music.
- The unit can also be used to indicate when the doorbell or the telephone is ringing, which is particluarly interesting for the hearing-impaired.
- Adjustable sensitivity with potentiometer.
- Built-in microphone.
- consumption: 0.5mA min. / 12mA max.
- power supply: 9V battery (not incl.)
- dimensions: 40 x 55 x 35mm / 1.6 x 2.2 x 1.4”

MK103 ★★

MK146 Pocket uu meter in enclosure

MK146 ★★

MK186 Low voltage led light organ

Also available as completely mounted mounted VM186 panel-mount concept: easy to build in. Hi-power output. built-in microphone. Adjustable sensitivity. blue indicator led. ideal for: . 12/24V RGB led strips. 12/24V single colour led strips. 12V halogen lamps. incandescent lamps. 12V led lamps. etc.... suited for in-car use
power supply: 12-24VDC
- output: 5A max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37”

MK186 ★

MK187 Low voltage led dimmer

Also available as completely mounted mounted VM187 panel-mount concept: easy to build in. Hi-power output. Adjustable level. blue indicator led. ideal for: . 12/24V RGB led strips. 12/24V single colour led strips. 12V halogen lamps. incandescent lamps. 12V led lamps. etc.... suited for in-car use
power supply: 12-24VDC
- output: 5A max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37”

MK187 ★

MK172 Sound star

Traditional LED VU-meters are boring!
This star-shaped VU-meter will brighten up your party! 60-LEDs sound star. responds to sound and music in a ‘VU-meter’-fashion. built-in microphone. adjustable sensivity. multiple units enhance the effect. great for parties, events, trade-shows, as eye-catcher etc.
power supply: 9 - 12VDC / 200mA
- dimensions: 105 x 110 x 35mm / 4.2 x 4.4 x 1.4”

View Demo

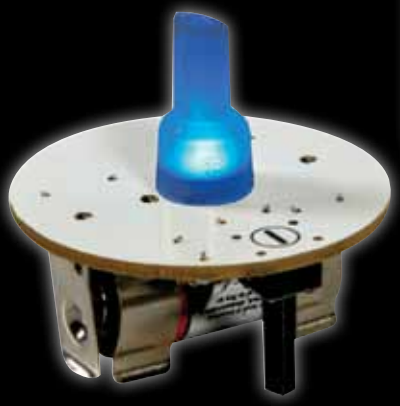
MK172 ★★

ELECTRONIC RGB CANDLE

MK184

Realistic flickering flame effect, as opposed to similar import items. Safe for pets, children and furniture.
colours: Yellow / Red / Blue / Green / Cyan / Magenta. fixed colour or automatic colour change mode. Hi-power RGB led
battery: 6V/165mAh (4LR44 not incl.)

- power consumption: 3-10mA (depends on selected colour)
- dimensions: diameter: 38mm/1.5" - h: 36mm/1.4"



38mm
36mm
HI-POWER RGB LED
MK184

MK167 Electronic candle

cannot be blown out by the wind. safe for kids and pets. great at home, for parties, Xmas, Halloween, etc.. choose between 3 different modes: . realistically flickering flame. steady flame. fade in - fade out. fits standard 38mm cup. safe: no flame or heat. 5h turn-off timer saves batteries. yellow high-intensity LED
power supply: 1x CR2032 3V battery (not incl.)

- autonomy: +/- 15 days (5h/day, flickering candle mode)
- power-off timer: +/- 5h
- current consumption: 4mA max
- dimensions: 38x25mm / 1.50 x 0.98"

★★
MK167

MK143 White led flashlight

white LED technology. 2 high-power LEDs (4500mcd). LED life: > 100.000h (more than 11 years at a stretch !). low power consumption. runs up to 10 hours on a single battery (test conditions : 15s ON, 60s OFF continuous for 7 hours/day). automatic battery management for efficient use of battery power. built-in strobo effect for emergencies. Can also be used as an attention grabber, ...
power supply: 12V e.g. V23GA, GP23GA, etc… (battery not incl.)

- dimensions: 60 x 40 x 14mm / 2.4 x 1.6 x 0.6"
- weight: 31g (with battery)

★★
MK143

MK123 Rolling clock

Nicely animated rolling time and date display.

- Graphic display with 35 LEDs.
- Select hours, minutes, month or day with SELECT and enter the values with SET.
- Time display in 12h-mode (24h-mode when setting clock).
- Fine-tune the clock with CV1.
- power supply: 9-12Vdc adapter or car battery
- current consumption: 20mA max.
- backup battery: 9V block type 6LR61 / 6F22
- dimensions: 46/89 x 67mm (1.8/3.5 x 2.6")

★★
MK123

57mm

MK153 Jumbo single digit clock

gadget clock. time is displayed as a sequence of digits. bright 57mm jumbo red 7-segment display. complete with attractive enclosure. single button operation. 'blank display' function
12h system

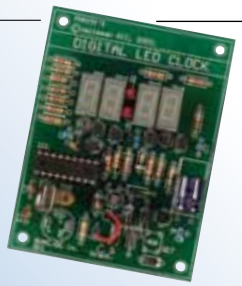
- accuracy: 30ppm
- power supply: 9-12VDC/150mA max.
- dimensions: 74 x 59 x 32mm / 2.9 x 2.3 x 1.3"

★
MK153

MK151 Digital led clock

clock with red 7-segment displays in an attractive enclosure. automatic time base selection (internal or net-frequency controlled 50/60Hz). internal time base with fine-tuning adjustment. select 12h- or 24h-mode for the time display. equipped with backup battery (3 x AA) in case of power failure. clock still displays the time in case of power failure
power supply: 9V AC/DC

- dimensions: 92 x 45 x 101mm / 3.6 x 1.8 x 4"
- recommended adapter: PS905AC (230VAC)



★★
MK151

MK128 Kitchen timer

Times 1 minute to 1 hour.

- Single button, straightforward operation.
- Clear 16-LED readout.
- Audible and visible alarm with discrete pre-alarm.
- Auto power-off.
- Attractive designer enclosure.
- μcontroller technology
- settings:
  - 1-10': one minute steps
  - 10-30': five minute steps
  - 30-60': 15 minute steps
- basic accuracy: better than 5%
- power supply: 3 x AAA 1.5V batteries (not incl.)
- power consumption: 10mA typ.
- dimensions: 76.5 x 75 x 32mm / 3.1 x 3.0 x 1.3"

★★★ MK128

MK177 Ding dong

classic 'ding dong'-sound. plays 'dingdong'-sequence twice when triggered. early retrigger prevention. attractive, compact design. speaker included. on-board pushbutton. input for external pushbutton. low power consumption

8 ohmspeaker

- power supply: 9VDC bat.
- current consumption:
- idle: <1μA
- active: 55mA
- dimensions: 70x97x30mm / 2.75 x 3.8 x 1.2"

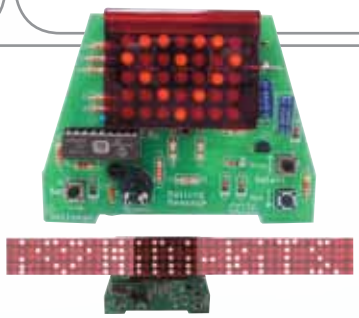
★★ MK177

MK108 Water alarm

Gives alarm sound when water is detected.

- Incorporated alarm buzzer.
- Water sensor can be placed at a distance by cutting the board and using wires to connect the sensor.
- power supply: 9V battery (not incl.)
- dimensions: 45 x 70mm / 1.8 x 2.8"

★ MK108



MK157 LCD mini message board

- miniature message board with a single-line 16-character LCD display.
- message scrolls from right to left with adjustable speed.
- applications: at exhibitions, for advertising, to greet visitors at the front door, as a name tag, ...
- message memory for 46 characters.
- possibility to add pauses during scrolling
- power supply: 2 x AAA battery (not incl.)
- dimensions: 100 x 38 x 32mm / 3.9 x 1.5 x 1.3"

★★ MK157

MK158 LCD mini message board with backlight and enclosure

miniature message board with a single-line 16-character backlit LCD display. 124-character EEPROM message memory. message scrolls with adjustable speed. built-in message editor. built-in RS232 interface for easy message uploading and displaying. free interfacing software available from www.velleman.be. applications: at exhibitions, for advertising, to greet visitors at the front door, as a name tag, serially-controlled display in equipment, ...

power supply: 9VDC / 100mA

- dimensions: 115 x 43 x 75mm (4.5" x 1.7" x 3.0")

★★ MK158

MK124 Rolling message

Create your own moving message.

- Graphic display with 35 LEDs.
- Max 16 characters.
- Adjustable scrolling speed.
- Press "SET" to change a particular character.
- Press the up or down-key to select a character and end with the ">"-sign.
- Display standby function: press "Stby" (press RUN to restart).
- power supply: 9-12VDC adapter or car battery
- current consumption: 20mA max. / 4mA standby
- backup battery: 9V block type 6LR61/ 6F22
- dimensions: 46/89 x 67mm (1.8/3.5 x 2.6")

★★ MK124

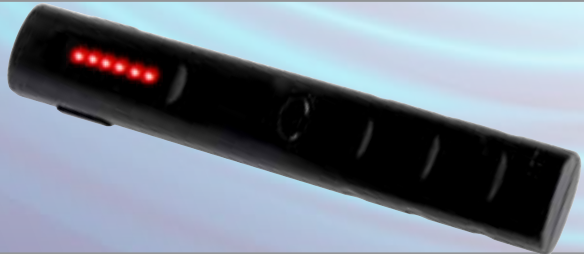
MK155 Magic message

amaze your friends: wave the wand to make the message appear. the message seems to float on the air.... lots of built-in messages + enter your own 7-character message. applications: novelty gadget, in emergencies, at concerts or TV-shows, to welcome people, etc.... excellent visibility due to high intensity red LEDs. low power consumption. auto power-off

power supply: 2 x AAA batteries (not incl.)

- dimensions: 160 x 26 x 24mm / 6.4 x 1 x 0.9"

★ MK155



MK154 5-in-1 emergency tool

microprocessor technology. functions include: flashlight, emergency flasher, SOS morse code flasher, SOS message wand and lighting distance meter. applications: camping, biking, hiking, boating, in the car, etc.... attractive enclosure with belt clip. low power consumption

power supply: 2 x 1.5V AAA batteries (not incl.)

- dimensions: 160 x 26 x 24mm / 6.3 x 1 x 0.9"

★★ MK154

MK179 Proximity card reader

store up to 25 tags. excellent security: 64-bit coded. Unlimited # of tags in low-security mode. two tags supplied (card-type). Easy addition and removal of tags. Output activation: 0.5s to 4min or toggle (ON/OFF). Coil can be mounted away from the board (up to 5m) for higher security. applications: . open doors, fences, gates, etc.... arm/disarm security systems in homes / offices / vehicles etc.... Prevent unauthorised use of equipment, machinery, computer systems etc.... automate cat doors.... options: . HAA86C/TAG: optional acces card. HAA86C/TAG2: optional acces badge. also available as completely mounted mounted VM179

EM4100 compatible
- relay output: max. 3A/24V
- power supply: 12VDC/100mA
- dimensions: 66x62x20mm / 2.6x2.4x0.8"

MOUNTED VERSION VM179: p38

MK179 ★★

MK161 2-channel ir remote receiver

two channels with relay output (24VAC/DC 1A max.). ultra compact. channel and reception indication through LEDs. toggle / pulse selection for each channel. learn mode for channel ID. all settings are stored in EEPROM. compatible with most Velleman Kit IR remotes: MK162, K6710, K8051, K8049
power supply: 12VDC
- power consumption: 75mA max.
- dimensions: 45 x 50 x 15mm / 1.7 x 1.9 x 0.6"

MK161 ★★

MK162 2-channel ir remote transmitter

compact 2-button IR keychain remote. compatible with most Velleman IR receivers. 2 powerful IR LEDs for a range of up to 15m (indoors). 16 channels (allow use of multiple transmitters in one room). easy channel configuration, no jumpers required. 'Transmit'-LED

power supply: 12V (e.g. V23GA / GP23GAC, etc...) (not incl.)
- dimensions: 60 x 40 x 14mm / 2.3 x 1.6 x 0.5"

MK162 ★★

MK160 Remote control via mobile phone

turn equipment ON and OFF from a random place via your cellular phone. applications: turn on the lights or the heating, open your gate, control animal feeders, make believe you are at home, activate a car alarm, etc.. ring detection circuit avoids phone charges. no need to open or modify your cellular or connect it with other devices. compatible with most cellular phones.

dual operation mode: toggle ON/OFF or ON with auto turn-off timer
- timer settings: 0.5s, 2s, 30s, 1 min, 5 min, 15 min, 30 min and 1 hour
- NO/NC 3A relay output
- power supply: 12VDC / 100mA
- dimensions: 101 x 42 x 23mm / 4 x 1.7 x 0.9"

*Cell phone not included

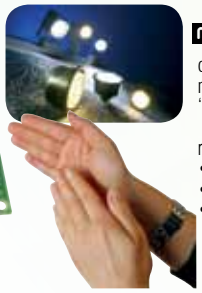
MK160 ★★

MK137 IR remote checker

The easy way to check your IR remote for proper operation.
- Simple operation : point the remote at the sensor and push an arbitrary button.
- Four flashing LEDs indicate remote operation.
- low power consumption
- power supply: 9V battery (not incl.)
- dimensions: 55 x 30 x 33mm / 2.2 x 1.2 x 1.3"

MOUNTED VERSION VM139: p40

MK137 ★★



MK139 Clap on/off switch

operate your lighting simply by clapping your hands. ideal for disabled or elderly people. good immunity against surrounding noises. '1-clap' or '2-clap'-mode selection. '2-clap'-mode features built-in safety turn-off timer (approx. 5h). output relay 'pulse' or 'toggle' selection. microprocessor-controlled. output relay with LED indicator

relay power rating: 24VDC/AC 3A
- power supply: 12VDC / 150mA
- with DC adapter socket
- dimensions: 79 x 73 x 22mm / 3.1 x 2.9 x 0.9"

MK139 ★★

MK138 Thermostat

General purpose low-cost thermostat with NTC temperature sensor.
- Output relay with LED indicator.
- temperature range: +5°C to +30°C approx. (41°F to 86°F)
- relay power rating: 24VDC/AC 3A
- power supply: 12VDC / 100mA
- dimensions: 54 x 62 x 28mm / 2.1 x 2.4 x 1.1"

MOUNTED VERSION VM137: p38

MK138 ★★

MK125 Light sensitive switch

Automatically switches on at dusk and turns off at dawn.

adjustable sensitivity with wide range. delay circuit avoids cycling

relay output: NO/NC 24V/5A max.
- power supply: 12VDC
- with adapter connector
- dimensions: 65 x 50mm / 2.6 x 2.0"

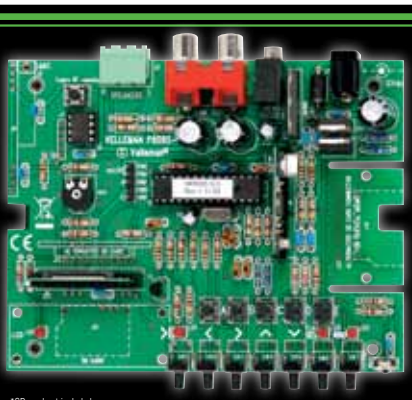
MK125 ★★

MP3 PLAYER PROJECT

K8095

Finally it is possible to build your own MP3 player! Create your own home audio system, jukebox, jingle player, audio messages, sound effects, … MP3, where you want and how you want it!
optional: . LCD: PC1602WRS-KWA-E. RF receiver mounted: RX433N. 8-channel RF remote transmitter: VM118R (mounted). 8-channel RF remote control: K8058 (Kit-version). RF remotes: only for EU.
suitable for SD and SDHC cards

- amplifier: 2x 5Wrms @ 4ohm
- power supply: 12Vdc/1A
- dimensions: 130 x 99mm / 5.11 x 3.9”



*SD-card not included

SUITABLE FOR SD CARDS ★★★★★ K8095

K3400 Dual electronic dice

Board games are an excellent source of pleasant and healthy entertainment.

- However, the dice can be a constant source of irritation: they fall off the table, they’re not cheat-proof, they’re picked up before everyone has seen the result, etc.
- There can be no doubt whatsoever as to the result displayed on this electronic dice mounted and cheating is out of the question.
- Two fully independent dice.
- You have a choice of playing with one or two dice.
- The displays are switched off automatically after 30 seconds in order to save battery power.

★ K3400

K5200 4-channel multi-function running light

This circuit does more than an ordinary running light : it not only runs in both directions, but it also flashes with two groups of lamps (flip-flop) and with all the lamps at the same time.

- The four light effects follow each other automatically.
- 4 triac outputs: max. 2A each (400W at 220V or 200W at 110V)
- can be synchronised to mains or can work asynchronously
- running speed: adjustable in asynchronous mode, fixed speed in synchronous mode
- suppression of radio interference in synchronous mode
- supply voltage: 220VAC
- PCB dimensions: 110 x 85mm (4.3” x 3.4”)

★★★ K5200

K8032 4 channel running light

The running light mounted is the perfect addition to your existing system if you are looking to create the kind of effects used in a disco.

- The speed of this mounted can be adjusted manually.
- All the outputs are equipped with a LED indication.

★★★ K8032

K5600R Advertisement led display with red leds

Create your own message for personal advertisements. Can be used for home, shop, car or truck...

- 12 self definable characters, which are made by de customer.
- 150 bright LEDs supplied with the kit.
- Many spectacular light effects on the message, (scrolling, blinking, rolling, panning...).
- Adjustable effect speed.
- Vertical or horizontal position possible.
- Different displays can be synchronised, to create longer messages, or to create giant advertisements.
- Special housing available : B5600.
- Extra LEDs available : K/LEDHR (red) and K/LEDHG (green).

↔473mm

★★★★ K5600R

K4900 Telephone amplifier

This telephone amplifier may be used as a freestanding amplifier with speaker, e.g.

- to listen to a telephone conversation, or the output may be connected to an amplifier or mixing panel (e.g.
- radio stations).
- input: isolation transformer interface
- speaker output: 0.5W / 8ohm
- line output: 0dB (0.775Vrms)
- power supply: 7 - 9VAC or 9 - 12VDC / 150mA
- PCB dimensions: 63 x 52mm / 2.5 x 2.1”

★★ K4900

K4102

An electric guitar cannot be connected to just any amplifier or audio installation.

- This pre-amplifier has been designed for this purpose and provides you with a headphone output, allowing you to practice without disturbing others.
- sound adjustment
- adjustable input sensitivity
- low noise
- headphones output: max. 2 x 50mW / 32ohm
- housing included
- power supply: 9V battery (not incl.)
- dimensions: 70 x 30 x 105mm / 2.8 x 1.2 x 4.1”

★ K4102

K2655 Electronic watchdog

A circuit that produces a natural sounding barking dog with a sensitive “ear” to everything that comes near it.

- It is a faithful watchdog, which never sleeps and never has to be taken out for a walk.
- power supply: 2 x 8VAC or 9 - 12VDC / 500mA
- choice of two different “dog sounds”
- reacts to surrounding noise with adjustable sensitivity
- speaker output: 2W at 4ohm
- PCB dimensions: 142 x 75mm / 5.6 x 3”

★★ K2655

AUDIO ANALYSER

K8098

Small and compact unit, ideal for panel mounting. Give your homemade audio gear a high-tech look. Upgrade existing equipment.

- measure: . peak power. RMS power. mean dB. peak dB. linear audio spectrum. 1/3 octave audio spectrum. auto or manual range selection. peak-hold function. speaker impedance selection. language selection. white backlit LCD. easy panel mounting
- power measurement into 2, 4 or 8 ohms + bridged amp option
- range: 300mW to 1200W @ 2 ohms
- sensitivity: -34dBu (15.5 mVrms)
- max. input level: 50Vrms @ 220k
- frequency range: 20Hz to 20kHz
- power supply: 12VDC / 75mA

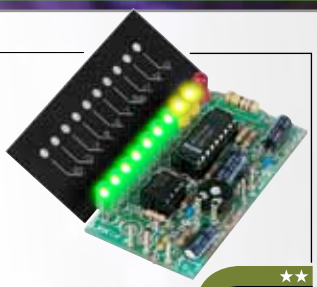
↕64mm
↔128mm

K8098

K4304 Mono vu-meter 10 leds

VU meter with a scale consisting of 10 LEDs and an adjustable input.

- Dot or bar indicator.
- Supplied with 1 front panel suitable for horizontal or vertical mounting.
- range: -20dB to +3dB
- power supply: 10 - 15VDC / 250mA
- input sensitivity:
- low input: 150mV to 6Vrms (47K)
- high input: 1.5V to 60Vrms (470K)
- dimensions: 37 x 68mm / 1.5 x 2.7"

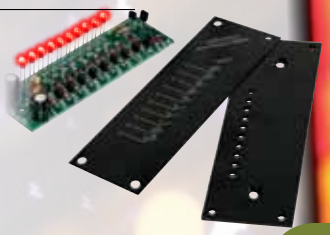


★★ K4304

K4307 Audio power meter

10 LED scale, up to 2000Wrms power measurements.

- Does not need a special power supply, because it is supplied directly from the speaker output.
- Ideal for car audio systems and PA systems.
- Also usable for bridged amplifiers.
- The unit can be used both horizontal and vertical.
- The kit comes with a front panel and four attractive front stickers, for the different scales.



★★ K4307

K4305 Stereo vu-meter 2 x 10 leds

Stereo VU meter with 2 x 10 LEDs (dot or bar indicator) and an adjustable input.

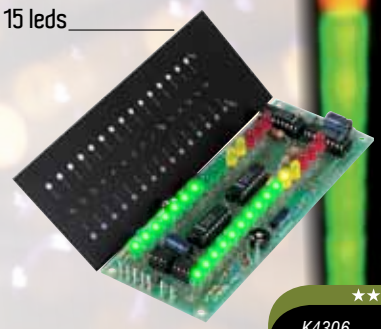
- Package contents include 1 front panel suitable for horizontal or vertical mounting.
- range: -20dB to +3dB
- power supply: 10 - 15VDC / 250mA
- input sensitivity:
- low input: 150mV to 6Vrms (47K)
- high input: 1.5V to 60Vrms (470K)
- dimensions: 37 x 68mm / 1.5 x 2.7" (x2)

★★ K4305

K4306 Precision stereo vu-meter 2 x 15 leds

Stereo VU meter with 2 x 15 LEDs (dot or bar indicator) and an adjustable input.

- Package contents include 1 front panel suitable for horizontal or vertical mounting.
- scale from: -23dB to +5dB (linear scale between -4 and +5dB)
- precision: ± 0.5dB (1kHz)
- input impedance:
- low input: 150mV - 5Vrms
- high input: 1.5V - 50Vrms
- frequency range: 20Hz - 30kHz (-3dB)
- power supply: 12 - 15VDC / 300mA
- dimensions: 150 x 57mm / 5.9 x 2.2"



★★ K4306

K2604 Siren

Enter the world of amazing electronic sounds and noises.

- Create or imitate sirens of all kinds by adjusting 3 trimmers.
- Powerful sound with a 2W amplifier on the PCB.
- power supply: 8 - 14VDC / 1A
- modulation speed: 0.5 - 5s
- frequency: 300 - 6000Hz
- output power: +/- 2W max.
- dimensions: 80 x 55 x 15mm/3.14 x 2.16 x 0.6"

★ K2604

K4301 Pink noise generator

A good pink noise generator and a spectrum analyser are indispensable if you want to analyse the acoustic properties of a room (usually a living room).

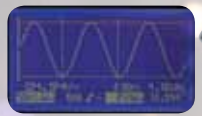
- Moreover, you also need a microphone with a frequency characteristic that is as linear as possible (from 20Hz to 20kHz).
- If you have an equaliser, then the response can not only be checked but also corrected.
- The kit is easily adapted to produce "white noise".

★ K4301

K8065 Pocket audio generator

Great little gadget for service, repair, testing, education, etc...

- microprocessor technology. digital waveform generation.
- sine wave: 50Hz, 100Hz, 1KHz, 10KHz, 20KHz
- burst: 50Hz, 100Hz, 1KHz
- burst mode: 20ms ON, 500ms OFF
- noise: 32-bit digital noise
- output level (10Kohm): 0 to 775mV (0dB)
- outputs: 2 x RCA (cinch)
- power supply: 2 x CR2016 or CR2025 battery (excl.)
- dimensions: 86 x 50 x 25mm / 3.4 x 2 x 1"



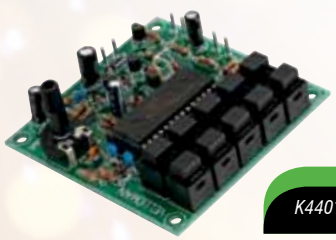
mounted version
VM156: p37

★★★★ K8065

K4401 Sound generator

The ideal device for DJ's, jingles for radio stations or just to attract attention.

- With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier.
- The following effects may be generated directly: "Wild charge tune" or "Snake charmers tune" · US siren
- supply voltage: 8 - 10VDC / 100mA or 9V battery (not incl.)
- line output: 1Vrms
- speaker output: 1W
- PCB dimensions: 75 x 75mm / 3 x 3"



★ K4401

K8077 Subwoofer kit

Kit contains all necessary parts to build your compact but powerful high quality subwoofer *
* Wooden panels not included!
bass-reflex system with adjustable tube. compact size due to dual-speaker principle. adjustable level and filter response. auto power-on/off system. phase switch (0°-180°). line level and speaker level inputs for maximum compatibility. 'Full-range'-option for use in active speaker system. separate chamber for electronics avoids air leaks
power output: 100Wrms/ 4ohm (10% THD)

- filter freq. response:
- wide: 25 - 110Hz (-6dB)
- narrow: 18 - 65Hz (-6dB)
- speakers: two 6.5" 8 ohm drivers
- line level input sensitivity: 500mV
- auto turn-on level: 5mV
- volume*: approx. 20 liter
- power supply: 120/230VAC
- dimensions: 460x310x210mm / 18.2 x 12.3 x 8.3"

★★★★★ K8077

K4700 2-channel loudspeaker protection

This stereo speaker protection prevents switch-on clicks and DC components on the output of the amplifier connected.
switch-delay: ± 6 seconds

- DC protection: +1V/-1V
- max. input voltage: 200Vpp + DC
- max. switching current: 10A
- LED indication for: WAIT (switch-on delay) and ERROR (DC on speaker output)
- supply voltage: 220VAC
- PCB dimensions: 55 x 125mm / 2.2 x 4.9"

★★★ K4700

K8036 Video signal cleaner

digitally cleans the video signal / removes unwanted distortion in video signal. stabilises picture quality and luminance fluctuations. improves picture quality on LCD monitors or projectors. S-video and composite video in- and output (it is impossible to use S-video and composite video signals simultaneously). LED indication when distorted video signal detected. for PAL / NTSC video. warning: . only use the K8036 to back up original video material of which you are the rightful owner (DVD, VHS, VCD, ...). check copyright information of the original material

power supply: 9Vdc / 100mA min. (adapter required)

- dimensions: 100 x 84mm (4.0" x 3.3")

mounted version VM106: p35

★★★ K8036

K7000 Signal tracer/injector

This signal tracer /injector has been designed to inject or detect a specific signal into an audio circuit in need of repair (such as amplifiers, radios, tone controls...

-) so as to detect the fault.
- In this way problems can be traced more easily.
- The signal tracer may also be used as a simple monitor or amplifier
- signal injector:
- 0-2.5Vrms output (adjustable)
- output impedance: 1.5Kohm
- frequency: ± 1kHz
- signal tracer:
- 3.5mV to 10Vrms sensitivity (adjustable)
- gain: 40dB
- input impedance: 50Kohm
- output power: 0.5W / 8ohm
- power supply: 7-9VAC or 9-12VDC / 150mA
- dimensions: 60 x 53mm / 2.4 x 2.1"

★★ K7000

STEREO VALVE AMPLIFIER

K4040 · chrome version
K4040B · black version

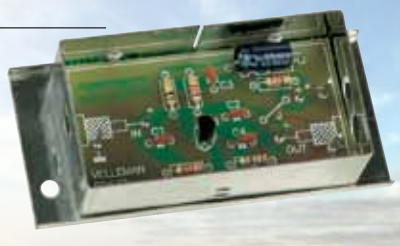
Now everybody can enjoy that sublime "valve sound".

- The sound of valves cannot be surpassed, neither by transistors nor FETs.
- In the development process, special attention was given to the housing so that the expensive valves are displayed in a visually attractive manner.
- The most vulnerable point of a valve amplifier are the output transformers; that's why we use ultra-linear and overrated output transformers (toroidal) to guarantee a rich bass response.
- To extend the life of the precious valves, the amplifier has a switch-on delay so that the high voltage is switched on when the valves are warmed up.

K2622 Am/fm antenna amplifier

This amplifier provides 22dB gain wherever you need it.

- DC power supply directly or via the coax cable.
- Metal housing included.
- gain: 22dB
- power supply: 12V to 15V / 3mA
- input- and output impedance: 50 - 75ohm
- frequency range: 10MHz to 150MHz
- dimensions: 86 x 36 x 24mm / 3.4 x 1.4 x 0.9"



★ K2622

K1803 Universal mono pre-amplifier

- This kit was developed as pre-module for a number of audio applications where the input signal is too weak. Applications as a microphone pre-amplifier or for level correction.
- power supply: 10-30VDC / 10mA
- output impedance: 1Kohm
- adjustable output level: max. 40dB
- frequency range: 20Hz to 20kHz ± 3dB
- max. input signal: 40mV
- PCB dimensions: 30 x 44mm / 1.2 x 1.7"

★★ K1803

K8066 3w mono amplifier

Small but powerful amplifier for a wide range of applications e.g.

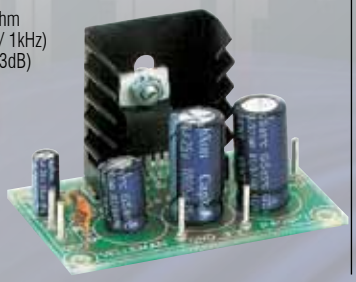
- microphone amp, doorbell, melody generator, intercom, sound effects, headphones, radio receiver, PC sound card, musical instrument...
- compact size. low partcount. no additional heatsink required. single supply. wide supply range. excellent protection
- output power: 3Wrms (4-8 ohm, 15VDC, 10% THD)
- frequency range: 50Hz - 20kHz (1W/8ohm, -3dB)
- gain: 32dB (40x)
- thermal protection
- short circuit protection
- power supply: 6 ~ 15VDC
- current consumption: 500mA max.
- dimensions: 42 x 50mm / 1.6 x 1.9"

★★ K8066

K4001 7w mono audio amplifier

This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4 ohms.

- The IC is fully protected against overheating and short circuits.
- A conventional direct current is sufficient as power supply.
- exists also in mounted version: vm114
- music power output: 7W / 4ohm
- RMS output: 3.5W / 4ohm or 2W / 8ohm
- total harmonic distortion: 0.05% (1W / 1kHz)
- frequency response: 20Hz to 20kHz (-3dB)
- signal/noise ratio: 86dB (A weighted)
- input sensitivity: 40mV / 150Kohm
- overload and short-circuit protected
- supply voltage: 15VDC (8 to 18VDC possible) / 0.5A
- dimensions: 55 x 35mm / 2.2 x 1.4"



mounted version VM114: p37

★ K4001

K8060 Discrete power amplifier 200w

excellent value for money. fully discrete design using Epitaxial Darlington transistors. DC supply circuit on board with LED indication. ideal for active speaker system or subwoofer, guitar amp, home theatre systems, instrument amp, etc.. comes complete with transistor isolators, spacers and bolts. overload and short-circuit protection. OPTIONAL HEATSINK REQUIRED! 200W music power @ 4 ohm load

- 100Wrms power @ 4 ohm load
- 70Wrms power @ 8 ohm load
- distortion: 0.02% @ 1KHz/10W
- damping factor: >800
- frequency response: 3Hz to 200KHz (-3dB)
- sensitivity: 0.6Vrms
- signal to noise ratio: 115dB
- power supply: 2 x 25-30Vac / 120VA
- PCB dimensions: 107x62mm (approx.)
- recommended heatsink: HSVM100 (pre-drilled) or S44/75 (not drilled)
- recommended power transformer:
- 230VAC input, 2 x 30VAC output: 12030

mounted version VM100: p35

★★★★★ K8060

POWERBLOCK POWER AMPLIFIER

K8081

This power amplifier is an ideal set-up for active speaker use. Build a high-quality system, using two (stereo) or more (surround) amplifiers.
Due to its auto switch-on, through input signal sensing, the unit can be installed at almost any place.

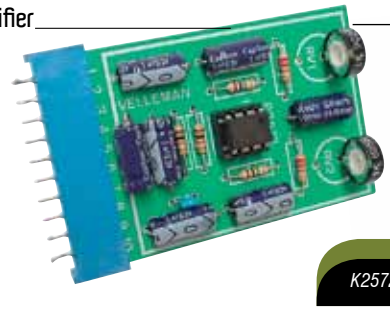
- Comes complete with enclosure and transformer.
- fully discrete design using Epitaxial Darlington transistors. includes all connectors, transformer and enclosure. overload and short-circuit protection. DC error protection with LED indication. automatic switch-on upon input signal sensing (automatic switch-off after a period of no signal)

- 200W music power @ 4 ohm load
- 100W rms power @ 4 ohm load @ 10%THD
- distortion: 0.02% @ 1KHz/10W
- damping factor: >800
- frequency response: 3Hz to 200KHz (-3dB)
- sensitivity: 0.6V rms
- signal to noise ratio: 115dB
- power supply: 235 or 115 Vac
- dimensions: 195 x 180 x 60mm / 7.7 x 7 x 2.4"

195mm
180mm

DISCRETE DESIGN
★★★★★
K8081

K2572 Universal stereo pre-amplifier



Universal low-noise stereo pre-amplifier.
frequency range: 40Hz - 30kHz (-3dB)

- max. input voltage: 50mVrms
- adjustable gain: 40dB max.
- output impedance: 1Kohm
- power supply: 10-30VDC / 5mA
- PCB dimensions: 44 x 65mm / 1.7 x 2.6"

★★
K2572

K2573 Stereo pre-amplifier for md pick-ups

RIAA stereo pre-amplifier for MD pick-ups.

- Low noise.
- supply voltage: 10 -30VDC / 5mA regulated
- gain (1kHz): 35dB
- input signal: 5 - 10mV
- input impedance: 47Kohm
- PCB dimensions: 44 x 65mm / 1.7 x 2.6"

★★
K2573

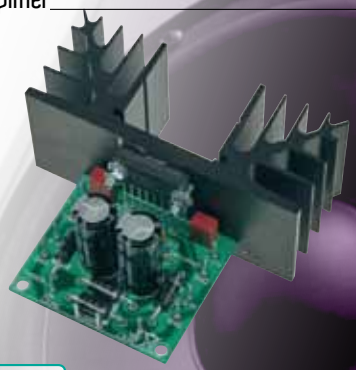
K8084 Volume and tone control preamplifier

When using one of our amplifiers (big or small), you always need a volume control and preferably also a tone control.
This kit comes complete with all input /output connections and potentiometers.
Furthermore it is possible to amplify or attenuate the input signal.
stereo volume control. stereo Baxandall bass and treble control. bass and treble potentiometers with centre click. customizable attenuation or amplification. complete with knobs
supply voltage: 2 x 12VAC / 100mA

- frequency response: 3Hz - 500kHz (-3dB)
- standard amplification: x1
- signal to noise ratio: 98dB
- harmonic distortion: < 0.005% (@1KHz)
- maximum output: 5V RMS
- tone control:
- + and -15dB @ 20Hz
- + and -15dB @ 15kHz
- Input impedance: 50k ohms
- PCB dimensions: 105 x 70mm / 4.1 x 2.75"

★★★★
K8084

K4003 2 x 30W audio power amplifier



This small amplifier is constructed with the TDA2616 IC, with a maximum supply capability of 2 x 15Wrms (4 ohm) of 2 x 10Wrms (8 ohm).

- The IC is protected against overheating and short circuits.
- music power output: 2 x 30W / 4ohm
- supply voltage: 2 x 12Vac / 2A (50W transfo recommended)
- dimensions: 70 x 50mm / 2.8 x 2"

mounted version
VM113: p37

★
K4003

200W mono / stereo amplifier

K4004B 200W
K4005B 400W

Universal, robust and compact are the words to describe this amplifier.
Universal : A stereo or a mono amplifier.

- Three input sensitivities are selectable.
- Robust : Overload and short-circuit protection, protection against incorrect power supply polarity and optional thermal protection.
- Speaker transient suppression.
- rms output power: 2 x 100W / 4ohm ; 2 x 75W / 8ohm
- rms mono-bridged power: 200W / 8ohm
- total music output: 400W
- harmonic distortion: 0.003% at 1kHz
- signal-to-noise ratio: 96dB (A-weighted)
- stereo channel separation: 76dB
- damping factor (at 100Hz): > 2000
- input impedance: 22kohm
- input sensitivity: 150mV, 300mV or 950mV switchable
- supply voltage for 8 ohm: + 35 to 40VDC and - 35 to 40VDC / 2.5A
- supply voltage for 4 ohm or mono: + 25 to 30VDC and - 25 to 30VDC / 5A
- dimensions: 350 x 62 x 85mm / 13.8 x 2.5 x 3.4"
- power supply: K4006

210mm
350mm

★★★	★★★★
K4004B	K4005B

K8020 Value control amplifier

- no compromise high-end design
- 4 inputs
- exclusive, high finish, solid aluminium enclosure
- high quality ALPS volume potentiometer
- full valve design
- auto muting (warm up) at power on
- highly reliable reed relay input selection
- separate left and right input section
- programmable level adjustment: +6dB for each input
- regulated DC filament supply
- output mute function
- switchable monitor output (for tape, CDR, MD,...)
- input sensitivity for 0dB (0.775Vrms) out: approx. 200mV / 50Kohm
- maximum output level: 35Vpp
- output load impedance: 10K or higher
- signal to noise ratio (A-weighted ref. 0dB out): 100dB
- total harmonic distortion: <0.04% @1kHz / 47K load
- gain: x2 or x4(+ 6dB on)
- frequency response:
  - 7Hz to 150kHz (-3dB) @ x2 gain
  - 18Hz to 55kHz within 0.3dB
- channel separation: 85dB @ 0dB in
- input cross talk: < -100dB @ 0dB in
- AC power: 115Vac (100V to 120V) or 230Vac (220V to 240V)
- consumption: 16W max.
- dimensions: 290 x 165 x 68mm / 11.4 x 6.5 x 2.7"
- weight (net): 2.7Kg (6lb)

165mm
290mm

★★★★★
K8020

K3502 Ultrasone radar

Detects objects using ultrasonic waves
When the preset minimum distance is crossed, an audible signal is generated
detection range: 5cm - 1.5m (adjustable)

- detection angle: 5°
- supply voltage: 10 - 15VDC / 16mA
- PCB dimensions:
- sensor: 28 x 95mm / 1.1 x 3.7”
- base: 48 x 125mm / 1.9 x 4.9”

★★★ K3502

K3504 Car alarm

The alarm detects sudden voltage drops of the battery when the interior, trunk, or hood lights are switched on.

- To ensure correct operation, a number of control indications have been included, such as : flashing LED to indicate that the alarm is in standby mode after a set time (after you have left the car).
- Pre-alarm (built-in buzzer) to indicate that the alarm is activated, so that you will not forget to switch it off.
- The alarm is easy to switch on and off, either automatically or by means of the ignition switch or a remote control unit, such as the K8059/K8057 or MK161/MK162
- detects voltage drops of the battery
- entry delay time: 2 to 30 seconds with buzzer indication
- exit delay time: 2 to 180 seconds with LED indication
- alarm period: 60 seconds with automatic reset
- power supply: 12V
- standby current: 25mA
- relay output: 5A
- PCB dimensions: 62 x 100mm / 2.4 x 3.9”

★★ K3504

K2543 Electronic transistor ignition for cars

Gives your car the feel of an expensive luxury car.

- Better starting and smoother running, particularly at very high and very low RPM.
- Lower fuel consumption, less pollution, lower servicing costs.
- Drive economically, drive electronically.
- Only for petrol/gasoline engines.
- Only for cars with negative ground.
- Tested on 2, 4, 6 and 8 cylinder cars
- max. current: 4A
- connection speed: up to 500kHz
- PCB dimensions: 70 x 35mm / 2.8 x 1.4”

★★ K2543

K3505 Car light warning alarm

This head light indicator may be set for one or two functions.

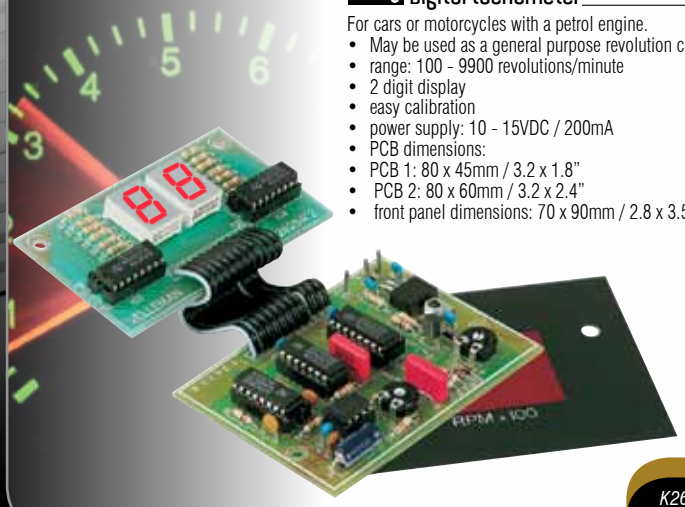
- To indicate that the headlights (or the sidelights) should be switched off after switching off the ignition contact (battery protection).
- Or to indicate that the head lights should be on once ignition contact is switched on (obligatory in some countries).
- continuously repeated alarm tone for lights ON (may be disabled)
- repeated alarm tone for lights OUT
- only 3 wires are required for hook-up
- supply voltage: 12V battery
- PCB dimensions: 48 x 57mm / 1.9 x 2.2”

★★ K3505

K2625 Digital tachometer

For cars or motorcycles with a petrol engine.

- May be used as a general purpose revolution counter.
- range: 100 - 9900 revolutions/minute
- 2 digit display
- easy calibration
- power supply: 10 - 15VDC / 200mA
- PCB dimensions:
- PCB 1: 80 x 45mm / 3.2 x 1.8”
- PCB 2: 80 x 60mm / 3.2 x 2.4”
- front panel dimensions: 70 x 90mm / 2.8 x 3.5”



★★★ K2625

K2599 Windshield wiper robot or interval timer

Up to 3 different time intervals (2 - 10 - 15 seconds) can be selected for the windshield wipers of your car.

- It can also be used for automatic slide projection.
- relays on PCB: 2 inverters
- power supply: 12 - 15VDC
- PCB dimensions: 82 x 56mm / 3.2 x 2.2”

★★ K2599

K3500 Multifunction car courtesy light

If, like most of us, you do not have infrared eyesight, then at times you have probably found yourself fumbling for the ignition switch or seat belt in the dark.

- For people like you we have developed this solution.
- With extra push button and battery protection.
- switch-off delay: adjustable for 0 to 60 seconds
- power supply: 12-15Vdc
- power consumption: 13mA
- PCB dimensions: 45 x 70mm (1.8” x 2.8”)

★ K3500

K2644 Frost indicator

Drive more safely in freezing weather.

- This kit uses a flashing LED to indicate a road temperature close to freezing point ; below that point the LED is on continuously.
- A reliable temperature sensor with mounting stud is included.
- power supply: 10 - 15VDC / 25mA
- PCB dimensions: 56 x 42mm / 2.2 x 1.7”

★ K2644

K/NEP Imitation car alarm

Car alarm simulation with on/off switch.
contents: flashing LED 12Vdc and 2 stickers

K/NEP

Clock

K8089

12/24h clock system. min temp readout: . celsius: -20°C. fahrenheit: -4°F. max temp readout: . celsius: 70°C. fahrenheit: 158°F. auto toggle function. easy time setting. easy wall mounting. back-up battery. automatic frequency detection. unique extra feature: auto toggle between time/temp and scrolling sign 'OPEN' or 'CLOSED'

power supply: 12VAC (e.g. PS1205AC)
- power consumption: 250mA max. (incl. temp. sensor*)
- backup battery: 3V (CR2032)
- power consumption on backup battery: +/-1mA
- dimensions: 230x74x32mm / 9 x 2.9 x 1.26"

★★★★★ K8089

K8063 2 modular digits with serial interface

bright, red, jumbo-sized 7-segment displays (57mm).. complete with snap-in enclosure. multiple units can be linked in an easy way to create larger readouts for e.g. score-keeping, timing, counting, ... easy platform-independent control via RS232 three-wire interface. up to 255 units can be separately addressed. tested with distances of up to 50m between PC and displays. for USB connection use our optional PCUSB6
power supply: 9 to 12Vdc / 120mA per display
- RS232 interface: 2400baud / 8 data bits / no parity / 1 stop bit
- dimensions: 74 x 58.5 x 32mm / 2.9 x 2.3 x 1.3"

★★★★ K8063

K8091EU Led clock with slow on dimmer

The K8091 is an attractive LED clock with connection possibility for a nightlight.
- From 15 minutes before the set time, the light intensity of the connected light will increase up to full power at set time and beeps will be heard.
- The beep length is gradually built up so you will not be startled by a sudden alarm signal.
- clock with red 7-segment display. possibility to connect any lamp armature fitted with a light bulb. sleep function (15 min) for slow light power-off. snooze function with alarm repeat function after 8 min.. manually settable light intensity. beep and / or light option

★★★★ K8091EU

K8067 Universal temperature sensor

Applications : measure indoor and outdoor temperatures, control heating and/or cooling of rooms, equipment, etc...
- Monitor temperatures in processes, put a temperature readout on your website, check your pools temperature...
- range: -20° ~ +70°C
- output: 0 ~ 20mA current loop
- output voltage compliance: 10V
- accuracy: 2° full range
- one single adjustment
- 3-wire system: GND, +V and OUT
- power supply: 12VDC for 0 ~ 5V OUT / 15VDC for 0 ~ 10V OUT
- current consumption: 30mA max.
- dimensions: 55 x 35 x 15mm / 2.2 x 1.4 x 0.6"

optional K8089

mounted version VM132: p38

★★★ K8067

K8086 Telephone ring detector with relay output

simply connect in parallel with phone line. powerful led flashes when phone rings. the unit will feature a relay output if connected to a 12VDC power supply. relay output: continuous or on/off to the rhythm of ringing of the telephone. complete with enclosure. great for noisy environments, for the hearing impaired, as addional ringer, to replace existing ringer, ... accepts standard adaptor & telephone plug. includes: . attractive enclosure. adhesive strips for easy fixing 10.000 mcd led !
- connects to PSTN line
- RJ11 connector
- supply: 12VDC/100mA adapter (Ex. PS1203)
- output Contact (NO): 1A max.
- dimensions: 80x55x35mm / 3.15 x 2.16 x 1.37"

mounted version VM144: p39

★★ K8086

K8087 Telephone ringer with buzzer and led

accepts standard telephone plug. simply connect in parallel with phone line. no power supply necessary!. buzzer sounds and powerful led flashes when phone rings. great for noisy environments, for the hearing impaired, as additional ringer, to replace existing ringer,.... includes: . attractive enclosure. adhesive strips for easy fixing 10.000 mcd led !
- connects to PSTN line
- RJ11 connector
- consumption: 10mA max.
- dimensions: 80x55x35mm/3.15 x 2.16 x 1.37"

★★ K8087

K8027 Relay output mounted for k8006

This switching mounted can be plugged into our K8006 base unit.

- Can be used to switch lamps or other domestic loads.
- To be controlled via push buttons, switches or one of our control mounteds or kits such as the K8046, K8055, K8061, K8000 PC interface, etc...
- (50/60Hz)
- max. load: 2.5A (275W/110V - 575W/230V)
- dimensions: 65 x 57 x 25mm / 2.6 x 2.2 x 1"

K8027

K8006 Domotica light system bus-pcb

Create your own domestic modular light control system.

- For use with optional plug-in mounted K8007 /K8037, plug-in timer mounted K8008 or plug-in slow-on/slow-off mounted K8029.
- Bus system holds up to five plug-in units.
- Optically insulated push button inputs.
- Can be controlled with open collector circuits (ex.K8000 /K8055/ K8061 computer interface card, with IR remote control receiver K8050 or with K8023).
- Local control pushbuttons included.
- LED power and mains indicator.
- LED operation indicator for each channel.
- Low-voltage (24VAC) control circuit for extra safety.
- Each plug-in slot is fused.
- Includes 10 LEDs for pushbutton illumination.
- A custom enclosure for rail mounting is available (B8006).
- 5 separated channels
- maximum output: 2.5A per channel (fuse protected)
- push button control current: 150mA
- open collector control current: 35mA DC
- power supply: 24VAC / 300mA
- supply voltage for mounteds: 110V to 240VAC

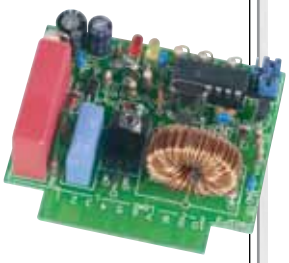
5 KANALEN

K8006

K8037 Bus dimmer for home modular light system

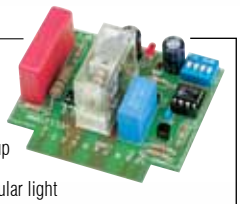
dimmer to be used in our K8006 home light system. suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional (wire wound) transformer. easy pushbutton operation. a brief push toggles on/off, while continued pushing engages dimming action. non volatile memory for last set light intensity. lots of safety features to make lamps last longer, such as "soft-start" and automatic deactivation after 12 hours or after 20 min at insufficient intensity .... transformer protection in case of defective light sources. LED status indication. replaces K8007
suppression of radio & TV interference according to EN55015

- operating voltages: 110-125V or 220-240V AC (50/60Hz)
- max. load: 350W/230V or 170W/115V
- max. phase shift with inductive load: 30°
- dimming speed: ± 5 sec.
- PCB dimensions: 65 x 57 x 25mm / 2.6 x 2.3 x 1"



K8037

K8008 Multifunction relay mounted



14 different functions including timers, switching, flashing, interval, random switching...

- Two pre-programmed delays.
- Learning mode for delays of 2 sec. up to 12 days.
- Pushbutton control (with home modular light system K8006).
- EEPROM for delay time storage in case of power failure.
- On-board transient filter for relay contacts or load (selectable).
- Suitable for control of incandescent lighting, halogen lighting, fluorescent lighting, fans, valves, buzzers...
- also available as stand-alone version: K8015
- operational voltages: 110-125 or 220-240Vac 50/60Hz
- max. load: 2.5A (550W / 220V ; 275W / 110V)
- dimensions: 65 x 57 x 25mm / 2.6 x 2.2 x 1"

K8008

K8068 Dimmer for electronic transformers

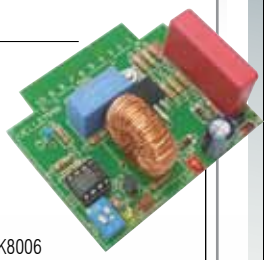
For use with K8006 bus system.

K8068

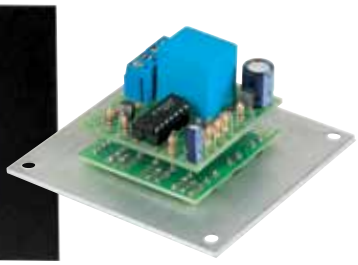
K8029 Slow on-off dimmer

Microprocessor controlled.

- Dual mode operation : • Slow on /Slow off dimmer with two independent and programmable delays.
- Dimming direction changes with each key press.
- Manual level control is possible.
- This mode also simulates a 'regular' dimmer.
- * Light is turned on at full power for a programmable time, after which it slowly fades to zero, also during a programmable time.
- for use with the Velleman home modular light system K8006
- 2 programmable delays ranging from 1s to 1h
- no memory loss in case of power failure
- 'soft-start' function that prolong the life of the bulbs
- AC power: 110-125 or 220-240VAC 50/60Hz
- max. load: 1.3A (150W / 120V - 300W / 230V)
- dimensions: 67 x 57 x 25mm / 2.7 x 2.3 x 1.4"
- not suited for use with low voltage halogen lighting or electronic transformers



K8029



K6400 Code lock

This code lock may be used to switch an alarm (e.g.car alarm K3504) on and off, or to open a door lock. An LED on the operating panel indicates the position of the 'lock'.

- The code is easy to define.
- Because the operation panel is completely enclosed, it may be used inside and outside the house.
- more than 3000 codes (4 digits)
- relay output: 5A / 220V
- time limit for code entry: ± 5 seconds
- power supply: 9 - 15VDC or 8 - 12VAC
- power consumption:
  - output on: 40mA
  - output off: 0.3µA
- dimensions:
- front panel: 80 x 80mm / 3.2 x 3.2"
- depth: 40mm / 1.6"

K6400

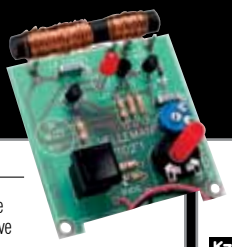
K8082 "safe"-style code lock

Innovating and impressive code lock. Impossible to determine the pressed keys due to the use of digital rotary encoder. codelock with rotary encoder and 7-segment display. 4-digit code. several operating modes. adjustable pulse duration. application examples: . open a door, gate, fence…. arm / disarm your alarm system. prevent unauthorized use (mode 3) of car, entertainment systems, computers, machinery…

relay output NO/NC: 3A / 24VDC max.

- power supply: 12VDC / 100mA max.
- Dimensions:
- front: 85 x 85mm / 3,35 x 3,35"
- mounting depht: 45mm / 1,77"

K8082



K7102 Metal detector

To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences.

- Likewise, drilling into gas, water pipes or central heating pipes can be extremely hazardous.
- With a handy metal detector it can now be determined beforehand whether there are metal objects to be found in a wall, ceiling or floor.
- An LED indicates if a metal object is in the vicinity.
- avoid disasters when drilling holes in walls. locate pipes, cables, metal studs, …. great project for novices. your own unique application. push button operation
- metal detecting distance adjustable: up to 8cm (3.15")
- power supply: 9V battery (not incl.)
- LED indication
- 12VDC-buzzer connection (buzzer not included)
- dimensions: 56 x 64mm (2.2" x 2.5")

★★★ K7102

K7101 Mains voltage detector

With this device wires can be very easily checked for mains voltage. It can be used to search for wires installed in or behind walls or to trace interruptions in wiring.
A flashing LED indicates whether or not voltage is present.

- The flashing speed indicates how close by the wire is.
- If an audible signal is also desired, space has been provided on the PCB for buzzer SV4/12-S to be connected.
- The PCB has been specially constructed to fit entirely into the separately available box type G407.
- detection of mains conducting cables
- LED indication (buzzer optional)
- adjustable detection distance: max. 10cm, 3.9"
- distance indication
- supply voltage: 9V battery (not incl.)
- dimensions: 56 x 64mm / 2.2 x 2.5"

★ K7101

K6600 Multitone chime

This device is a simple and economic way of generating electronic tones.

- This kit is primarily intended for use as a replacement for the traditional mechanical doorbell.
- Of course, it can also be used for many other types of applications.
- The number of tones may be selected up to a maximum of three, each of which is output one after the other.
- This can be used to help locate the place being called.
- Volume and tone can also be set.
- The existing bell transformer can be used as a power supply.
- adjustable tone and volume control
- 1, 2 or 3 tones selectable
- loudspeaker output: 0.3W / 8ohm
- power supply: 6 to 9VAC / 0.2A or 4.5V battery (3 x 1.5V AA batteries (not incl.)
- idle current: less than 10µA
- dimensions: 53 x 59mm / 2.1 x 2.3"

★ K6600

K8026 3.5a dimmer with potentiometer

Due to its small size, this small dimmer easily replaces an existing switch, permitting you to vary the brightness of a light or group of lights.

- The dimmer may also be used to adjust the speed of a motor, vacuum cleaner, or any other motor with carbon brushes.
- A mains suppresser is provided eliminating undesirable RFI.
- It is not suitable for halogen lamps.
- protected against induction voltage peaks
- load: 3.5A (750W at 230V and 380W at 110V)
- suppressed according to EN55015
- PCB dimensions: 60 x 60mm / 2.4 x 2.4"

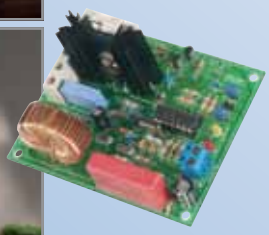
★★ K8026

K8064 Dc controlled dimmer

Geschikt voor het aansturen van gloeilampen, halogeenverlichting op netspanning of laagspanningshalogeenverlichting in combinatie met een conventionele transformator.

- simple brightness adjustment by means of a DC voltage. optically isolated adjustment input. pre-set adjustment for full brightness. suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional transformer. "Soft start" feature to ensure lamp longevity. transformer protection in case of defective light sources. LED status indication. compatible with our computer interface cards: K8000, K8055
- adjustment voltage: 0 to 12Vdc max.
- max. adjustment current: 2.25mA at adjustment voltage of 12V
- suppression of radio & TV interference according to EN55015
- operating voltage:
- 110-125V or 230-240V AC (50/60Hz)
- max. load: 750W/230V or 375W/110V, 0-98% adjustable
- max. phase shift with inductive load: 30°
- PCB dimensions: 90 x 75 x 40mm / 3.5 x 3 x 1.6"

★★★★ K8064



mounted version
VM101: p36

K8038 Power dimmer, push-button controlled · 1kw@230v

powerful high-quality dimmer, suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with a conventional (wire wound) transformer. easy push-button operation for dimming of light sources.. phase control can be disabled. non-volatile memory for last set light intensity. lots of safety features to make lamps last as long as possible, such as "oftstart" and automatic turn-off after 12h or after 20min at too low intensity. transformer protection in case of defective light sources. LED status indication

suppression of radio & TV interference according to EN55015

- operating voltages: 110-125V or 220-240V AC (50/60Hz)
- max. load: 1000W/230V or 500W/115V (5A)
- max. phase shift with inductive load: 30°
- dimming speed: ± 5 sec.
- PCB dimensions: 90 x 75 x 40mm
- ambient temperature: 10°C to 40°C

★★★★ K8038

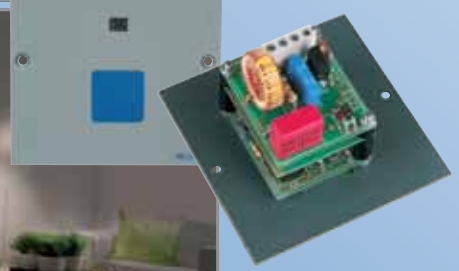
K8028 Multifunctional dimmer

microcontroller technology. 13 different functions: impulse switch, staircase light control, slow ON/OFF dimmer, interval timer, speed adjustment for fans, etc…. suitable for both resistive and inductive loads (light bulbs, high-voltage halogen lighting and low-voltage halogen lighting with ferromagnetic transformer). "Soft Start" prolongs the life of the bulbs. an advanced security system with fault indication automatically deactivates the mounted if the load or no-load behaves too inductively. can be operated from several locations, simply by the parallel connection of push buttons. 2 delay times (anywhere between 5 sec. to 2 hours each) can be programmed through the learning mode. memory is protected against power failures. equipped with fuse and key for function selection. equipped with a mains suppressor according to EN55015 norms

supply voltage: 110-125V or 220-240Vac, 50 or 60Hz

- automatic detection of mains frequency: 50 or 60Hz
- max. load: 2.5A (300W / 120V - 600W / 230V)
- dimensions: 100 x 82 x 36mm / 3.9 x 3.2 x 1.4"

★★★★ K8028



K6712 IR remote controlled dimmer

This one channel IR receiver/dimmer works together with the 15 channel IR transmitter (K6710 & K8049).

- The receiver code can be set to 1 of the 15 transmitter codes so that 15 receivers can be operated (K6712 and/or K6713) independently of each other.
- Thanks to its compact design this kit fits into a standard light switch housing.
- max. load: 2A (4A with heat sink)
- supply voltage: 220VAC 50/60Hz (110VAC possible)
- transmitter / receiver distance: max. 7m (23')
- not suitable for halogen lights

**Beschikbaar zolang de voorraad strekt*

★★★★ K6712

K8039 1 channel dmx controlled power dimmer

This kit allows you to control a lamp or group of lamps through a DMX signal.

- The DMX protocol was developed by USITT in 1986 with the purpose of controlling dimmers, scanners, moving heads and other lighting devices with simple wiring.
- It is mainly being used in theatres and discos, but you can use it in any place where a central or automated lighting is needed.
- Use our "USB controlled DMX interface" K8062 (kit version), VM116 (built version) or any other control console compliant with the DMX-512 protocol as a controller
- suitable for resistive loads like incandescent lamps and mains voltage halogen lighting. system addressability: 512 unique addresses, selectable with DIP switch. status LED for power and error detection. toroidal filtering for low noise (according to EN55015). stand alone "test" mode. control source: DMX-512, 3 pin XLR socket included
- load capacity: max. 1000 W @ 230V (5A) or 500W @ 115V
- power Input: 115/230 VAC
- size: 150 x 60 x 45mm / 5.9 x 2.36 x 1.8"

★★★★ K8039

K8044 12u, 10-channel light effect generator

this kit has 10, 12V/400mA outputs to control cold-cathode fluorescent lamps, light bulbs, LED's and "solid state" relays, ... for use with advertisement lighting, party lights, eye-catchers, in the disco.... 10 pre-programmed selectable light patterns with a push button. number of used channels is adjustable. adjustable speed. LED indication for every output. 12V operation possible for use in cars. the last used lighting effect is saved in non-volatile memory. options: . adapter (90 - 260V AC input to 12V DC output/ 5.8A): PSS1255. power supply for cold-cathode fluorescent lamps: FLPS (300mm) or FLPS1 (100mm). cold-cathode fluorescent lamps: FL(xx) - (100 or 300mm). "solid-state" relays for controlling large loads (lamps): VR25SS1A (1 x NO, 240V / 25A) or VR3SS1A (1 x NO, 240V / 3A). also available in mounted version: VM120
power supply: 12V DC
- consumption: max. 4A
- outputs: 12V DC / 400mA per channel (total : max 4A)
- dimensions: 140 x 100 x 27mm / 5.5 x 3.9 x 1.1"

mounted version VM120: p37

K8044 ★★★

LIGHT COMPUTER

K5201

Sixteen different programs and seven outputs make this light computer a unique showpiece.
- This kit can find applications in party lighting, discotheques, advertisement lighting, signalling, etc.
- To enhance the spectacle further, an unlimited number of circuits can be connected together to work synchronously.
- Moreover, two programs are provided which are specially adapted to operate two light computers in cascade.
- 7 triac outputs: 1.5A max.
- supply voltage for the lights: 24VAC to 240VAC
- supply voltage of the circuit: 7.5 - 9VAC / 250mA
- 16 programs
- speed controllable
- input for external clock
- PCB dimensions: 134 x 79mm / 5.3 x 3.1"

POPULAR PRODUCT
K5201 ★★★

K2601 Stroboscope

Flashing light effects for discos.
- Make your own snapshots and "lightning" light effects.
- Flash frequency adjustable from 2 to 20Hz.
- power supply: 220V - 240V AC
- PCB dimensions: 87 x 65mm / 3.4 x 2.6"

K2601 ★★

K8017 3-channel sound light with microphone

Low, mid and high channels. Sensitivity adjustment per channel.
- LED indication per channel.
- Attractive translucent enclosure.
- Microphone included.
- Noise suppressed according to EN55015.
- operating voltages: 110-125 or 220-240Vac (50/60Hz)
- max. load: 200W per channel (100W @ 110-125Vac)
- only suited for incandescent light bulbs
- dimensions: 155 x 45 x 160mm / 6.1 x 1.8 x 6.3"

K8017 ★★★

K8062 Usb controlled dmx interface

this unit can control DMX fixtures using a PC and USB interface. test software and "DMX Light Player" software is included, a DLL is provided to write your own software. optional 9V battery needed for stand alone test mode
- dimensions: 106 x 101 x 44.5mm / 4.2 x 4 x 1.75"

mounted version VM116: p41

K8062 ★★★★

K8072 Dmx-controlled relay switch

This Kit allows you to control a relay by means of the well-known DMX512 protocol.This protocol was developed by USITT in 1986 to control dimmers, scanners, moving-head spots and other lighting devices with a simple wiring. In some cases, a simple ON/OFF selection is desired.
- This is where this K8072 comes in.
- It is actually a bus-controlled power driver.
- The relay will be activated when the DMX value of the set channel equals 140 or more and turns off when the value is 120 or less.
- Together with our K8062/VM116, a computer-controlled automation will be very easy to build.

mounted version VM138: p41

K8072 ★★★

K8088 Rgb controller

ideal for use with flexible LED light lights strips, ex. LDB1-HS3027AC, CHLS4RGB
- suited for both incandescent bulbs and LEDs.

mounted version VM146: p36

K8088 ★★★★★

K8059 2-channel RF code-lock remote transmitter

more than 1,000,000,000 unique codes.
- open field range of up to 30m possible
- dimensions: 63 x 40 x 16mm (2.5" x 1.6" x 0.6")

★★★★ K8059

K8057 2-channel RF remote receiver with random code

Two relay contact outputs. toggle or pulse function selectable per output. pulse function with turn off timer. can learn a unique 32-bit code from the K8059 and VM108 transmitters. store up to 31 transmitters. no hardware settings required, full software control. code memory can be erased for safety purposes. LED indicators for outputs and functions. special function in pulse mode: both outputs can be set simultaneously when the two transmitter buttons are pressed at the same time. suitable for various control applications e.g. garage door, door to your home, lights, car...

power supply: 9 to 12V AC or DC / 100mA max.
- relay contacts NO / NC: 3A each
- 433MHz operation
- selectable timers per output: 0.5s, 5s, 30s, 1min, 5min, 15min, 30min and 60min
- open field range of up to 30m at room temperature
- NOTE: range can decrease in colder ambient conditions
- onboard antenna or external antenna
- dimensions: 100 x 82mm (3.9" x 3.2")

★★★ K8057

K8058 8-channel RF remote control

works together with the K8056 / K8070 / "VM119".
- 8 addresses allow the use of multiple receivers.
- 'all clear'- function.
- toggle or momentary mode for each key.
- open-field range up to 50m.
- rubber keypad
- operate up to 8 channels
- 433MHz operation
- LED function/mode indication
- power supply: 3 AAA batteries
- dimensions: 150 x 58 x 20mm / 5.9 x 2.3 x 0.8"

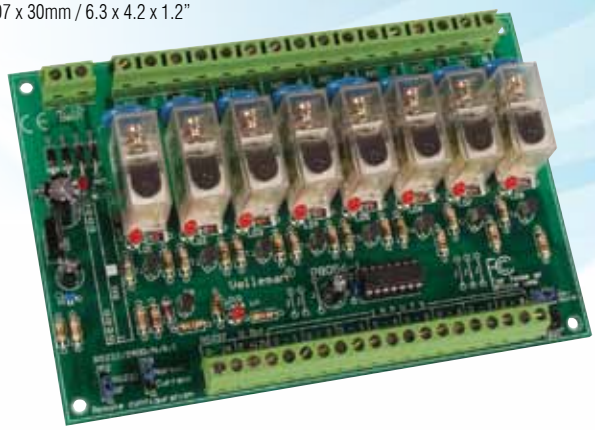
mounted version VM118R: p40

★★★ K8058

K8056 8-channel relay card

This relay card can be used in several ways : stand alone card, addressed by switches or open collector outputs or remote controlled through RS232.
- In option remote controlled using RF (radio frequency) signals (K8058 remote control + RX433N mounted).
- Since the card can be addressed using RS232 commands, you may write custom applications in any programming language on any platform.
- Test software can be downloaded from our web site.
- Recommended housing : B8006
- DIAGNOSTIC / TEST SOFTWARE: . separate relay on/off test with moment or toggle function. clear all / set all relays function. address selection: up to 255 cards can be selected. emergency stop for all cards. minimum system for test software: . Pentium class CPU. Windows 95 or higher. mouse and free RS232 port
- 8 high quality relay contacts: 5A/230Vac max.
- relay outputs are transient suppressed using VDRs
- LED confirmation on each relay contact
- 8 drive inputs to use with open collectors or regular switches
- RS232 input to drive the card with computer or terminal: baud rate: 2400, no parity, 8 data bits, 1 stop bit, high or low impedance selection (10K or 1K)
- optional RF driving possibility using RX433N type mounted (not simultaneous with RS232) together with K8058 eight channel RF remote control
- power output: unregulated 12Vdc / 200mA
- power supply: 12Vac / 500mA (including 12V output)
- diagnostic software downloadable from our site
- dimensions: 160 x 107 x 30mm / 6.3 x 4.2 x 1.2"

mounted version VM118: p40



★★★★ K8056

K8074 USB to RF remote control transmitter

This unit will turn your computer into a powerful remote control.
Simply connect to the USB port, install the driver and you are set.
The transmitter works together with our K8056 card, equipped with an RX433N receiver mounted.
- Also our K8070 /VM119 one channel receiver can be used.
- In total a combination of 255 cards can be addressed, resulting in a maximum of 2040 channels !! Drivers and example software can be downloaded from our web site.
- A DLL is provided to create your own application.
- USB1.1 or 2.0 port compliant
- up to 30m (depends on environment)
- works with:
- 8-Channel remote relay card: K8056 (+RX433N)
- One channel dual output RF receiver: K8070 / VM119
- RGB controller with RF remote: VM151
- RF transmit indicator LED
- power LED
- USB port function LED's
- 255 selectable addresses
- transmit—test button
- 433MHz transmitter
- R&TTE compliant design
- power supply: USB
- dimensions: 80x55x35mm

USB ★★★★★ K8074

K8051 15-channel ir remote stick

The K8051 15-channel IR Remote Stick features a sleek designer enclosure with just 2 buttons, yet it provides access to a stunning 45 channels (3 addresses with 15 channels each). The built-in 'all clear'-function allows the user to turn-off all channels of the current address at the same time.

- Channel and address selection is straightforward and easy.
- Even in total darkness you can select the correct channel and operate the remote.
- compatible with most current and upcoming Velleman IR kits: K6712 IR dimmer, K6713 1-channel IR receiver, K8046 8-channel touch screen, K6711 / K8050 addressable 15-channel IR receiver. single button channel selection and operation. code is recognised by most learning remotes
- range: up to 20m (K8050 / indoors)
- power supply: 2 x 1.5V AAA batteries (not incl.)
- low power consumption
- dimensions: 160 x 27 x 23mm / 6.3 x 1.1 x 0.9"

K8051

K8049 15-channel ir transmitter

compatible with: K6711, K6712, K6713, K8046, K8050, K4100, K4500, MK161, MK163, MK164. 4 addresses allow the use of multiple receivers in one room

power supply: 3 x 1.5V AAA batteries

- up to 15 channels can be operated
- rubber keypad
- LED function indication
- compatible with most Velleman IR receiver kits

mounted version VM121: p40

K8049

K8050 15-channel infrared receiver

works together with K6710, K8049, K8051, K8055, K8056, K6714, K6714-16, K2633, ... 15 open collector contacts: max. 50V/50mA. LED indication for each output. multiple IR sensors possible (type : IR38DM). transmitter - receiver range: up to 20m. 4 different modes: . 15 independent outputs. 15 rotary outputs. 7 independent outputs & 8 rotary outputs. 7 rotary outputs & 8 rotary outputs (independent from each other). 3 addresses allow the use of multiple receivers in one room. optional board-to-wire connectors-female: BTWF5 & BTWF20

power supply: 8 ~ 14VDC or 2x6 ~ 2x12VAC (150mA)

- current consumption:
- all outputs off: 10mA
- all outputs on: 150mA
- dimensions: 71 x 114mm / 2.8 x 4.5"

mounted version VM122: p40

K8050

K8023 10-channel, 2-wire remote control

This kit allows you to control up to 10 devices using only 2 wires at a long distance.

- Microprocessor controlled.
- Inputs can be push-buttons, switches or open collector outputs from another device.
- The receiver section provides 10 open collector outputs that allow you to control relays directly.
- Terminal block connectors for all input and output connections are included.
- All outputs are provided with LED indication.
- Can be used with our kits : K8000, K8006...
- Can be connected to our standard relay card : K6714 or K6714-16.
- 10 open collector outputs: 50V / 100mA
- tested to a distance of up to 50m (55 yards) between control- and receiver section
- operating voltage: single 12-15V AC or DC, 300mA
- dimensions:
- control pcb: 70 x 50 x 16mm / 2.7 x 2 x 0.6"
- receiver pcb: 103 x 50 x 24mm / 4 x 2 x 1"

K8023

K6501 Remote control by telephone

This kit makes it possible to turn up to three devices on or off over the telephone.

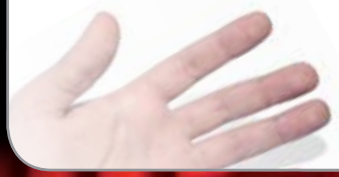
- It is also possible to check the condition of a switch (open or closed).
- Example : when you are away on holiday, you may switch the lights on and off from time to time, check the alarm or turn on the heating before returning home.
- A major advantage of this circuit lies in the fact that audio signals are used to tell whether a specific output has been turned on or off.
- Operation is protected by a user defined code, which is simply keyed in from the telephone keypad.
- a relay is included for one output: 10A / 250VAC
- automatic pick-up can be selected for ± 8 or ± 3 rings
- automatic hang-up if no code is entered within 20 seconds
- supply voltage: 12VAC / 300mA
- dimensions: 105 x 130mm / 4.1 x 5.1"

K6501

K8092 Optical proximity switch

small and compact unit. operate output relay by waving hand or object in front of unit. no touching required. adjustable sensitivity. status led indicators. momentary (pulse) or toggle (ON/OFF) mode. Perfectly suited for our Velbus system and our K8006 home bus system. Use for detection in DIY projects (not suited for very dark object detection). Comes complete with snap-in enclosure. Type VMBFBI. fits Velleman VMBFDG and VMBFLG frames
power supply: max. 12VDC/100mA

- output relay rating: 3A/24VDC
- LED indication
- dimensions (wxhxd): 21x47x41mm / 0.8x1.85x1.6"



★★★ K8092

K8035 Multifunctional up/down counter

very practical for counting people or parts, scorekeeping, ... counts up or down. count input through on-board push buttons or by external pulses. display modes: normal or time (hh:mm and mm:ss). an internal oscillator allows time measurement. a memory function constantly compares the current value with a preset value and activates an output for as long as both are equal. self diagnostic at power up. comes with easy board-to-wire connector (20cm wire). optional bezel enclosure: B8035

counter input voltage: 3...12Vdc (normal dry contact also possible)

- EQUAL output: 5Vdc / max. 50mA
- max. counting speed: 200 / sec. (2 / sec. with long debounce delay)
- max. count: 4 digits (9999 / 23h59m / 59m59s)
- power supply: 9 - 12Vdc or transformer 2 x 9Vac / 300mA, type : 209005
- power consumption: 150mA max.
- dimensions: 125 x 75mm / 4.9 x 3"

1-2-3-4-5-6-7-8-9-0

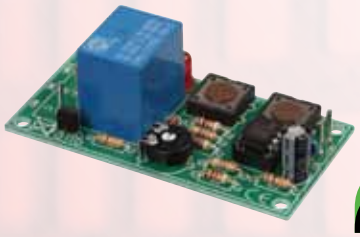
mounted version VM107: p25

★★★★ K8035

K2579 Universal start/stop timer

Miniature timer for all applications requiring a delay of up to 60 minutes.

- The control range may be adjusted.
- power supply: 12VDC / 55mA
- relay: 3A / 220V switchable
- time interval (without modifications): adjustable from 0 to 15 minutes
- PCB dimensions: 38 x 69mm / 1.5 x 2.7"



★ K2579

K8041 Fan timer

Allows single-button operation of both fan and lighting.

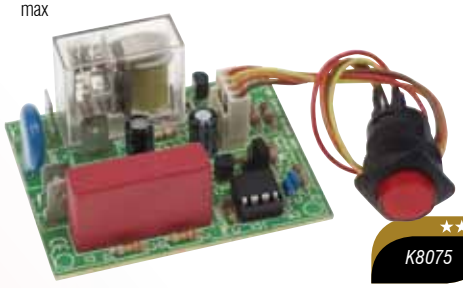
- Features automatic fan turn-off with adjustable delay for use in e.g.kitchen or bathroom.
- suitable for most types of fans. solid state switching with noise suppression. can be connected to existing installation. LED function indication.

★★★ K8041

K8075 Power saver / timer

The power saver turns off your equipment after a preset time.

- It helps you save money and it increases safety.
- available timers: 1h / 2h / 4h / 8h / 24h
- relay output: 10A / 240VAC max
- power supply: 100 - 240VAC
- dimensions: 65x50x26mm / 2.56 x 1.97 x 1"



★★★ K8075

K2639 Liquid level controller

You forget to turn off the tap, the washing machine leaks, the water level in your aquarium drops, the water tank is empty or suddenly overflows, there's water in your cellar, etc.

- These things happen and when they do, they often cause a lot of trouble and do a lot of damage.
- Prevention is still better than cure and that's where this kit comes in.
- This multifunctional device is easy to use in a variety of applications : 1) LED control of set fluid level : LOW, MIDDLE, HIGH ; 2) Controller : the relay automatically switches a pump and/or valve to keep the fluid level between the LOW and HIGH marks ; 3) Alarm : if the sensor detects a level which is too high or too low (selectable), the relay will operate a bell or another alarm device.
- power supply: 12-14VAC or 16-18VDC / 100mA
- relay output: 240V / 3A max.
- dimensions:
- controller PCB: 104 x 60mm / 4.1 x 2.4"
- sensor PCB: 104 x 25mm / 4.1 x 1"

★★★ K2639

K8004 Dc to pulse width modulator

This control circuit is ideal for the accurate control of DC motors, lighting levels, small heaters as well as other applications.

- The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage.
- The great advantage of such a circuit is that almost no power is lost in the control circuit.
- Protected against overload and short circuit.
- power supply: 8 to 35VDC
- maximum output current: 6.5A
- input voltage: between 2.5 and 35VDC
- dimensions: 85 x 48 x 45mm / 3.4 x 1.9 x 1.8"

★★★ K8004

K2636 Speed controller

Designed to control AC motors with carbon brushes (drilling machine, vacuum cleaner, saw, …).

- High torque, even at low r.p.m.
- May also be used for low voltage loads (24V).
- Supply and load circuit electrically isolated from one another.
- voltage supply: 110-240V
- load voltage: 24-240VAC / 5.5A max.
- adjustable minimum r.p.m.
- low interference level
- range: 5-95%
- PCB dimensions: 130 x 75mm / 5.1 x 3"

★★★ K2636

8-CHANNEL USB RELAY CARD

K8090

- USB-controlled relay card
- manual operation for toggle, momentary or timer operation (selectable through software)
- timer settings up to 18 hours (DLL function)
- optional open collector connectivity (push button simulation
- DLL for own software development (download only)
- event-driven and open protocol
- two way PC communication (USB Event return
- power supply for relays: 9-10Vac or 12 to 14Vdc (500mA), example: PS1205
- 8 high-power relays: 16A each (resistive load)
- dimensions: 160 x 107 x 30mm / 6.3 x 4.2 x 1.2"

mounted version VM8090: p.41

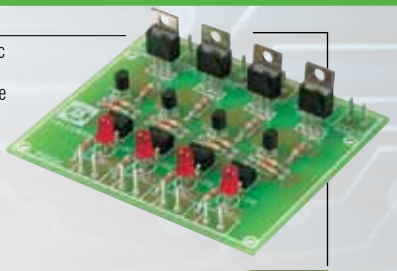
*iPhone and iPad are registrated trademarks of Apple Inc., registrated in the US and other countries

16A/ HIGH POWER RELAY
USB
PAD/POD/PHONE APPLICATION
★★★★★
K8090

K2634 Quad triac switch card

Relays are usually used to switch AC voltages by means of an electronic control because of their simplicity.

- However, when switching occurs too frequently or too quickly the life time of the contact points is shortened considerably.
- This can be solved perfectly by replacing the relays with a triac.
- Using optocouplers, the entire interface network remains electrically isolated from the voltage that has to be switched.
- 4 triac outputs: 1.5A (uncooled, 4A cooled)
- power supply: 9VDC, 200mA
- PCB dimensions: 78 x 90mm / 3.1 x 3.5"



★★
K2634

K2633 Relay card

Connecting a number of relays to the outputs of an electronic circuit may seem very simple, but in reality it might possibly create some problems regarding the cabling.

- This kit provides an attractive and compact alternative.
- Moreover, it can be assembled and connected very rapidly.
- 4 x 3A relay outputs
- power supply: 9VDC / 300mA
- pcb dimensions: 76 x 69mm / 3 x 2.7"

★★
K2633

K8015 Multifunction relay switch

14 different functions including timers, switching, flashing, interval, random switching...

- Two pre-programmed delays.
- Learning mode for delays of 2s up to 12 days.
- Pushbutton control.
- EEPROM for delay time storage in case of power failure.
- On-board transient filter for the relay contacts.
- Suitable for control of incandescent lighting, halogen lighting, fluorescent lighting, fans, valves, buzzers...
- also available as plug-in mounted: K8008 for K8006 base unit for modular light system
- operating voltages: 9-12Vac or 12Vdc
- max. load: 5A (1100W / 230V ; 550W / 115V)
- dimensions pcb: 87 x 39 x 26mm / 3.4 x 1.5 x 1"

★★★
K8015

Universal relay card

K6714 8 channel
K6714-16 16 channel

If you want to switch large electric currents using an electronic control and require control isolation at the same time, then this card is a valuable asset.
also available with 16 relays: K6714-16
8 relays included (extendible to 16)

- the relays can be piloted directly of through open-collector outputs
- contact: 1 x inverter: 10A / 28VDC or 125VAC, max. 5A at 230VAC
- relay switch-over contact: max. 5A at 220V
- output voltage: 12V / 250mA for power supply
- power supply: 220 or 115VAC / 12VA
- PCB dimensions: 150 x 212mm / 5.9 x 8.4"

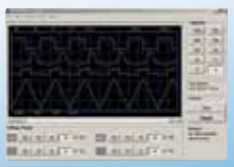
★★★
K6714 | K6714-16

K8047 4-channel recorder / logger

record DC signals or slow-moving signals over very long periods. the measurements are automatically stored on your hard disk for further processing. no power supply is necessary thanks to the USB connection and installation is easy and straightforward. signals are instantly displayed on the PC screen using an analogue or DVM display. USB cable included. PC-LAB2000 Software included. comes with enclosure
hardware: USB connected and powered; four DC coupled input channels; input resistance: 1Mohm; maximum samples per second: 100; four input ranges: 3V / 6V / 15V and 30V; sensitivity: 10mV; accuracy: ± 3% of full scale; maximum input: 30Vdc

- power and recording/diagnostic LED
- software:
- analogue trace or digital DVM readout
- 4 channels record simultaneously
- minimum / maximum sample hold function for DVM

USB

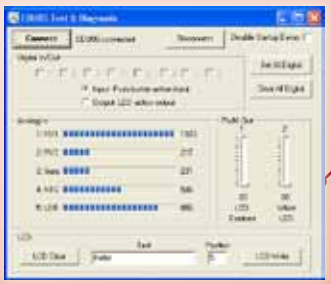


★★★★
K8047

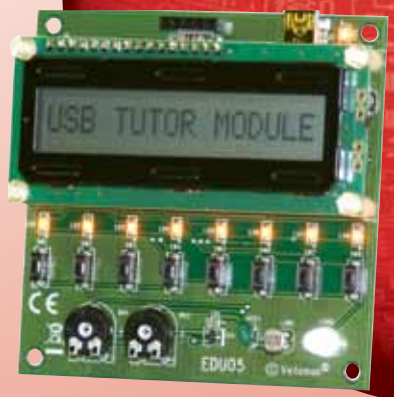
EDU05 USB tutor mounted

Make your first steps into the PC- USB world! Using this tutor mounted, learning how to master USB communication with the outside world becomes simple. Examples and tutorial in Microsoft Visual Basic, C++ & C# editions
EDU05 USB Tutor board demo
part of our EDUKIT range. starting form an already made example program, this mounted will teach you how to: . read up to 8 push buttons and activate a PC event. light up to 8 LEDs using your PC. read the value of 2 different potentiometers (analog value). read and display the temperature on the PC. read the value of a temperature dependent resistor (NTC). read the value of a light dependant resistor (LDR). Dim a white LED using your PC. learn how to display text on an LCD using your PC. learn how to combine the above and use the LCD to display push button press, display values..

USB 1.1 - 2.0 compatible
- USB powered + LED indicator
- PC with windows XP or higher (internet needed for software download)
- digital input/output:
- 8 definable push buttons
- 8 definable LEDs
- 1 White LED
- analog input:
- temperature sensor
- NTC resistor
- LDR resistor
- 2 potentiometers
- display:
- 16 character 1 line LCD
- included: USB cable
- board dimensions: 75 x 75mm / 3x3"



DISCOVER THE WORLD OF ELECTRONICS



View Demo
EDU05

K8048 PIC™ programmer & experiment board

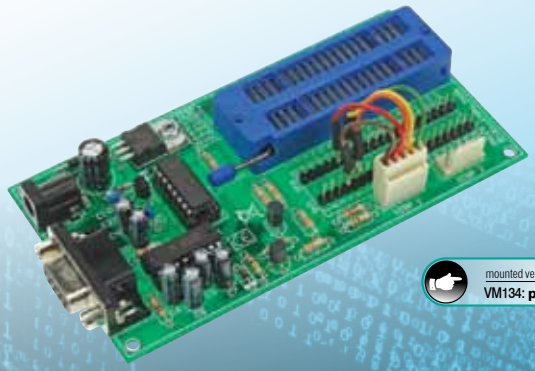
Suitable for programming Microchip® FLASH PIC™ microcontrollers
supports 4 different 300 mil. PICs: 8p, 14p, 18p and 28p. test buttons and LED indicators to carry out educational experiments, such as the enclosed programming examples. easy connection to a PC through the serial port. enclosed is a Flash Microcontroller (PIC16F627) that can be reprogrammed up to 1000 times for experimenting at will. software to compile and program your source code is available on our website. minimum system requirements: . IBM Compatible PC, Pentium or better. Windows™ 95/98/ME/NT/2000/XP. CDROM. free serial RS232 port. cable not included: e.g. CW014. also available in mounted version: VM111
power supply: 12Vdc unregulated or 15Vdc regulated / 300mA
- dimensions: 145 x 100mm / 5.75 x 4"

mounted version
VM111: **p41**

★★★★★
K8048

K8076 PIC™ programmer board

This board can program a wide range of Microchip® PIC™ microcontrollers
Suitable for the programming of the "VM142" mini PLC microcontroller
onboard configurable 40 pin. ZIF socket. Microcontroller selection using patch jumper. SUBD connector set included. minimum system requirements: . IBM Compatible PC, Pentium or better. Windows™ NT/2000/XP. free serial RS232 port required. also available as completely mounted mounted VM134
power supply: 15V DC, min. 300mA adapter (Ex. PS1508)
- serial port connector: 9 p. SUBD
- dimensions: 132x65x20mm / 5.23 x 2.57 x 0.8"



mounted version
VM134: **p41**

supported controllers: PIC10F200, PIC12C508A, PIC12CE518, PIC12F629, PIC12F675, PIC16F54, PIC16F84A, PIC16F870, PIC16F871, PIC16F872, PIC16F873,PIC16F874, PIC16F876, PIC16F877, PIC16F627, PIC16F627A, PIC16F628, PIC16F628A, PIC16F648A, PIC16F630, PIC16F676, PIC18F2550...

★★★★★
K8076

USER-DEFINABLE 8-CHANNEL TOUCH PANEL

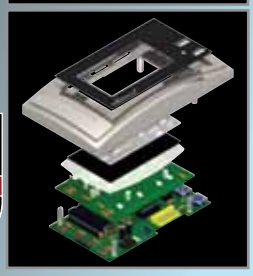
K8046

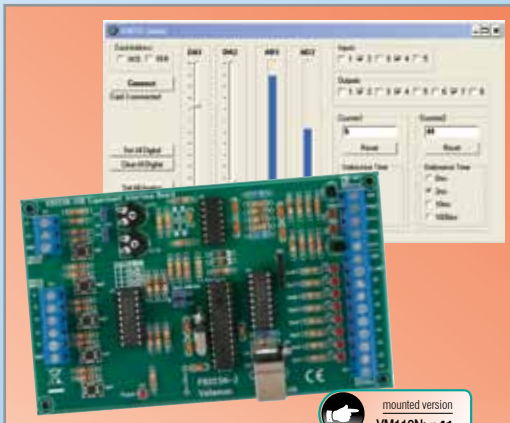
Ever wanted your own keyboard with your personal layout and symbols ? Here is the solution : Now simply print YOUR keyboard layout on a transparent foil and make your own keyboard ! The function of each key can be selected (momentary or toggle) and each key is backlit.

- 8 open-collector switches: max. 50V / 100mA
- board to wire connectors: 20cm wire
- dimensions (frame included): 165 x 90 x 35mm (6.5" x 3.5" x 1.4") (depth)
- keyboard operating force: 40g (with R0.8mm test point)
- keyboard life: 1000000 operations with R3mm rubber
- power supply: 9VAC or 12VDC / max. 250mA
- dimensions: 165 x 90 x 35mm / 6.5 x 3.5 x 1.4"

↔ 165mm

SOFTTOUCH WITH 8 KEYS ★★★★★ K8046





mounted version VM110N: p41

K8055N Usb experiment interface board

The K8055N interface board has 5 digital input channels and 8 digital output channels. In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution. The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL). You may write custom Windows (XP, Vista, Windows7) applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL.

- Source code examples for Visual Basic, Visual C++, Visual C#, Excel, Delphi and Borland C++ builder are available.
- DIAGNOSTIC / TEST SOFTWARE:
  - separate output / input test
  - clear all / set all function
  - counter function on inputs 1 and 2 with adjustable debounce (max 20kHz depends on total I/O load)
  - analogue output set sliders
  - analogue input bar-graph indication
- minimum system requirements:
  - 1 GHz or faster 32-bit (x86) or 64-bit (x64) processor
  - USB1.1 or higher connection
  - Windows XP or later
- 5 digital inputs (0= ground, 1= open) (on board test buttons provided)
- 2 analogue inputs with attenuation and amplification option (internal test +5V provided)
- 8 digital open collector output switches (max. 50V/100mA) (on board LED indication)
- 2 analogue outputs:
- 0 to 5V, output resistance 1K5
- PWM 0 to 100% open collector outputs max 100mA / 40V (on board LED indication)
- up to 4 cards can be connected to PC
- general conversion time: 2ms per command
- uses Microsoft® human interface device (HID) driver, no external driver required.
- diagnostic software, examples and DLL are downloadable via our website
- power supply through USB: approx. 70mA
- dimensions: 145 x 89 x 20mm / 5.7 x 3.5 x 0.8"

USB ★★★★ K8055

K8045 Programmable message board with LCD, serial interface & 8 inputs

add an LCD display to any low-tech application and make it look high-tech !. replace up to 9 indicators or lamps by one single backlit LCD. recall messages simply by pressing a button. inputs accept dry contacts, open collectors and logic levels. no programming skills required !. store up to 9 sixteen-character messages in non-volatile EEPROM memory. 4 operating modes: . 1): display the status of all inputs simultaneously. 2): display all active inputs. 3): display active input with highest priority. 4): display text messages in a 'tickertape'-fashion. a default message can be displayed to signal that no inputs are active. messages can be transferred to the K8045 from any PC or terminal. message transfer software is available from www.velleman.be. wireless data transfer between PC/terminal and K8045 is possible with optional RX/TX433 mounteds. 1 on-board push button is available for an application of your choice. options: . RF wireless link: RX433N + TX433N. supertwist HQ display: LCD1601ASL. bezel enclosure: B8045

inputs: 8 (24Vmax)

- display: supertwist backlit LCD with 16 characters and 1 line
- communication: RS232 serial 2400/N/8/1 no handshaking
- power supply: 9-12VDC/150mA adapter or 2x9VAC/150mA transformer
- dimensions: 124 x 73 x 30mm / 4.9 x 2.9 x 1.2"

★★★★★ K8045

mounted version VM140: p41

K8061 Extended USB interface board

This interface board has a total of 33 input/outputs: including analogue /digital and + 1PWM output.
Connection to the computer is galvanically-optically isolated, so that damage to the computer is not possible thus providing a high level of secure implementation.
All communication routines are contained in a Dynamic Link Library (DLL).
You may write custom Windows*.

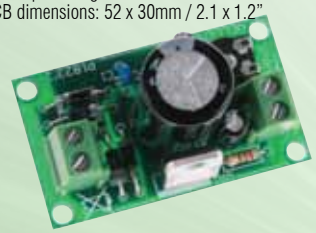
- Applications in Delphi, Visual Basic, C++ Builder or most other 32-bit Windows application development tool that supports calls to a DLL.
- For first time interfacing and tutoring, check also our K8055 USB experimentation interface board
- 8 analogue 10 bit resolution inputs: 0…5 or 10VDC / 20kohm. 8 analogue 8 bit resolution outputs: 0…5V or 10VDC / 47ohm. 8 digital inputs: open collector compatible (connection to GND=0) with on board LED indication. 8 digital open collector outputs (max. 50V/100mA) with on board LED indication. one 10 bit PWM output: 0 to 100% open collector output (max 100mA / 40V) with on board LED indication.. general response time: 4ms per command. USB Port: 2.0 and 1.1 compatible (USB cable included). also available as completely mounted mounted VM140

USB ★★★★★ K8061

K1823 1a power supply kit

This small power supply provides a regulated voltage, adjustable between 1.5 and 35 volts at 1 Amp.

- With the LM317 regulator remarkably better ripple and regulation characteristics are given than with conventional regulators.
- Current limiter and thermal overload protection are included in the IC.
- Supplied without heatsink.
- output current: 1.5A max.
- max. dissipation: 15W (cooled)
- max. input voltage: 40VDC
- PCB dimensions: 52 x 30mm / 2.1 x 1.2"



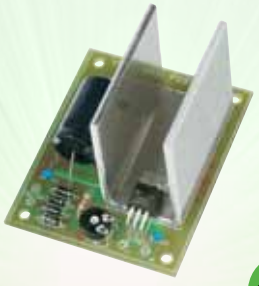
mounted version VM124: p35

K1823

K2570 Universal power supply 5-14vdc / 1a

Suits all Velleman kits requiring a regulated power supply between 5 and 12VDC, and no more than 1A.
input voltage: 7-16VDC / 1A

- output voltage: 5-14VDC, regulated
- output current: max. 1A
- power limitation and thermal overload protection
- max. dissipation: 7W
- PCB dimensions: 77 x 61mm / 3 x 2.4"



K2570

K7203 3 to 30u / 3a power supply

This kit is meant as an auxiliary or as a permanent power supply for all common Velleman kits based on a stabilised DC voltage between 3 and 30V provided that the consumption does not exceed 3A.

- Of course this power supply unit can also be used for other purposes.
- By replacing the trimmer by a potentiometer, it may even be used as an adjustable power supply unit.
- Supplied with heat sink.
- output voltage: adjustable from 3 to 30V, stabilised
- output current: max. 3A
- output ripple voltage: 0.5mV
- short-circuit stable
- overload protected
- input voltage: 9 to 30VAC (depending on the desired output voltage)
- transformer not supplied
- dimensions: 130 x 91 x 50mm / 5.1 x 3.6 x 2"

K7203

K8071 1w/3w high-power led driver

Power up to four 1W or two 3W high-power LEDs (not incl.).
350mA or 700mA constant current source

- input voltage: 6..12VAC/9-18VDC
- power consumption: 650mA max.
- dimensions: 45x30x16mm / 1.8x1.2x0.64"

mounted version VM143/1W: p37
mounted version VM143/3W: p37

K8071

K8042 Symmetric 1a power supply

low cost universal symmetric power supply. just add a suitable transformer and a heatsink. ideal for e.g. op-amp applications, amplifiers, ... trimmers can be replaced by potmeters to allow continuous adjustment of output voltage. LED output indicators. compact size
positive and negative output adjustable between 1.2 and 24VDC

- output current: up to 2 x 1A continuous (with suitable heatsink)
- max. input voltage: 2 x 24VAC
- very good line and load regulation
- low ripple
- short circuit protection
- thermal protection
- optional heatsink: HS4003 (for maximum 20W dissipation)
- dimensions: 78 x 52 x 24mm / 3.1 x 2 x 0.9"

K8042

K7302 Low cost universal battery charger

Charges NiCd or NiMH batteries.

- Ideal for car use.
- Transforms a mains adapter in to a charger (adapter socket included).
- Charge cellular phone, toys, portables, video batteries...
- Selectable charging current.
- LED charge indication.
- charging current: 50mA, 100mA, 200mA, 300mA, 400mA (selectable)
- supply voltage: from 6.5V to 21V (depending on used battery)
- supply current: same as charging current
- power supply polarity protected
- LED function indication
- dimensions: 40 x 60mm / 1.6 x 2.4"

K7302

K7300 Universal battery charger/discharger

Many battery chargers are available on the market, but few of them are universal chargers.

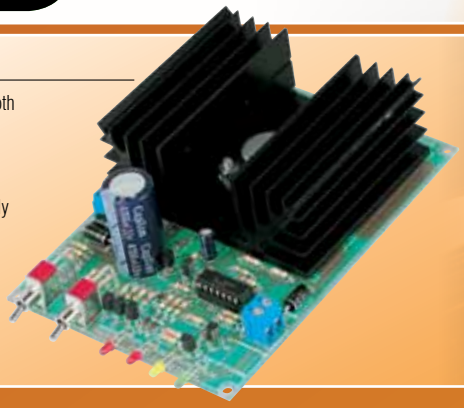
- Using our kit, NiCd and NiMH batteries or different can be charged both quickly (52 minutes) and normally (14 hours).
- In order to ensure that the battery is fully discharged prior to charging and thus has a longer life cycle, an automatic discharger is also fitted.
- charging current: from 15mA to 750mA (selectable)
- charges both NiCd and NiMH batteries
- usable battery voltages: 1.2V, 2.8V, 3.6V, 4.6V, 6V, 7.2V, 8.4V and 9.6V
- quick charge in 52 minutes / normal charge in 14 hours
- automatic discharge and charge cycle
- dimensions: 85 x 78mm / 3.4 x 3.1"

K7300

K8012 Lead-acid battery charger/conditioner

This lead-acid battery charger/conditioner is suitable for charging and maintaining both open and sealed type 6 or 12V lead-acid batteries.

- Charging current : 0.3 or 1A.
- The battery can be hooked-up to the unit for an indefinite time, and will be kept in optimal condition.
- Battery type and charging current are selectable, while the charging process is fully automatic.
- suitable for 6 and 12V open and sealed type lead-acid batteries. status indicators for charge, float and end-of-charge. can continuously remain hooked-up to the battery. inverse polarity protection provided. needs an 18V/25VA transformer (not included)
- charging current: 0.3 or 1A (selectable)
- PCB dimensions: 97 x 140 x 40mm / 3.8 x 5.5 x 1.6"



K8012

ROBOTIC ARM

KSR10

Enter the world of basic robotic technology and build your own robotic arm with five motors and five joints.

- The arm features a five-switch hard-wired control unit, a rotating base, elbow and wrist articulations, and a functional gripper.
- The built-in searchlight brings more fun when operated in the dark.

USB INTERFACE

KSR10/USB

Optional USB interface kit which connects our KSR10 robotic arm to a USB port on a personal computer running with Microsoft applications.

KSR11 3 in 1 all terrain robot

The three-in-one All Terrain Robot is a multi-function tracked mobile robot.

- Use different track mounteds to transform your robot into 3 amazing models: Forklift, Rover and Gripper.
- The wired controller commands the robot to make it move forward, backward, turn, grip or lift.
- hard-wired control unit. recommended age: 14+. recommended age: 14+
- power supply: 4 x AA batteries (LR6Cnot incl.)
- weight: 425g

KNS1 Tyrannomech

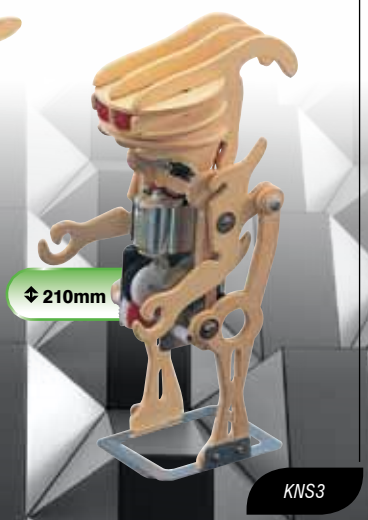
transmission: gear drive operation. supplied with: pre-punched boards, gearbox, gears, shafts, switch, motor, battery holder and all necessary parts. instructions are easy to follow. required tools: knife, screwdriver, long-nose pliers
dimensions: 410 x 175 x 75mm / 16.14 x 6.9 x 2.9”

- powered by: 2 x AA batteries (not included)

KNS3 Robomech

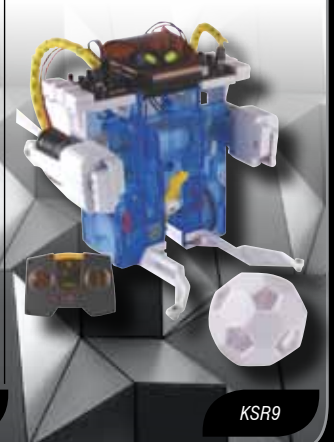
transmission: gear drive operation.
dimensions: 90 x 210 x 80mm

- powered by: 2 x AA batteries (not included)



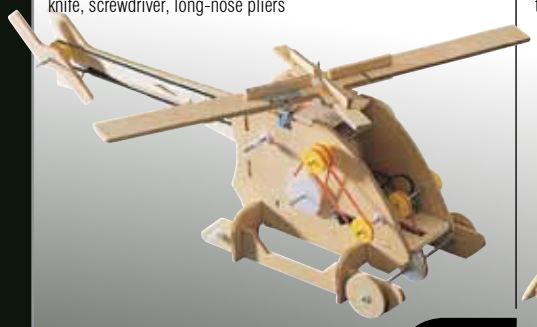
KSR9 Botball

put up to 4 Botballs into competition with each other using the multichannel IR remote control. 3 motors allow smooth moving, turning, passing, dribbling and kicking. give your Botball a unique jersey by changing its colour and number.



KNS4 Coptermech

transmission: pulley drive operation. supplied with: pre-punched boards, gearbox, gears, shafts, switch, motor, battery holder and all necessary parts. instructions are easy to follow. required tools: knife, screwdriver, long-nose pliers



KNS4

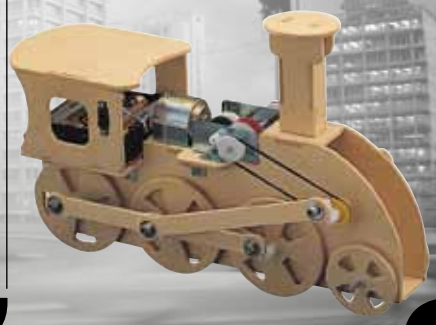
KNS5 Automech

transmission: pulley drive operation. supplied with: pre-punched boards, gearbox, gears, shafts, switch, motor, battery holder and all necessary parts. instructions are easy to follow. required tools: knife, screwdriver, long-nose pliers

KNS5

KNS6 Trainmech

transmission: gear drive & pulley drive operation. supplied with: pre-punched boards, gearbox, gears, shafts, switch, motor, battery holder and all necessary parts. instructions are easy to follow. required tools: knife, screwdriver, long-nose pliers

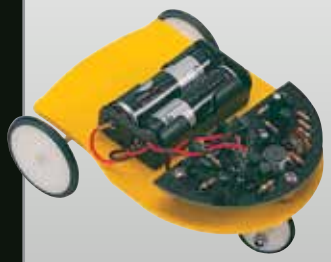


KNS6

KSR1 Robot car

A sensor-activated robot car.

- The car changes directions when the sensor detects noise or when the car hits an object.
- recommended age: 14+
- uses a microphone as sound sensor
- dimensions: 110 x 90 x 60mm
- power supply: 2 x 1.5V AA batteries (not included)



KSR1

KSR4 "escape" robot kit

The Escape Robot Kit works just like an A.I. robot.

- It never fails to find its way out of a maze.
- The Escape Robot uses 3 IR emitting diodes and 1 IR receiving mounted to send and receive signals and detect obstacles.
- The Escape Robot's built-in microprocessor enables it to "think" on its own: it gathers and processes information on its environment so it can avoid any obstacle.
- The Escape Robot moves about on 6 legs.
- This kit comes complete with 2 sets of differently designed legs that move in their own distinct way.
- Fun and excitement are guaranteed!
- recommended age: 14+
- dimensions: 140 x 150 x 100mm / 5.5 x 5.9 x 3.9"

KSR4

KSR8 Titan tank

put up to 4 tanks into battle with each other using the multichannel IR remote control. each Titan Tank will recoil and make shooting sound effects when firing. Titan Tank will automatically turn around when shot by another Titan Tank. Once shot 4 times the Titan Tank will continue to turn around and produce a siren sound. 6-wheel drive allows each Titan Tank to move and turn smoothly. no soldering required.

KSR8

KSR2 Robot frog

The robot frog moves forward when it detects sound and repeats the following movements sequentially : start (move forward) -> stop -> left turn -> stop -> right turn -> stop.

- Two sets of gear motors (unassembled).
- dimensions: 90 x 125 x 100mm / 3.5 x 4.9 x 3.9"
- power supply:
- mechanical: 2 x 1.5V AA batteries (not included)
- electronic: 9V-battery (not included)

KSR2

KSR6 "ladybug" robot kit

The Ladybug Robot walks on 6 legs and uses infrared emitting diodes for "eyes" in order to avoid obstacles.

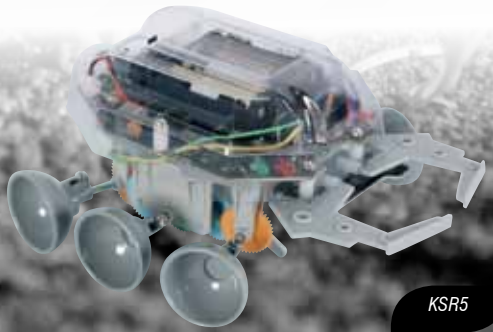
- Ladybug walks straight ahead but automatically makes a left turn the moment an obstacle is detected.
- The Kit comes complete with 2 sets of differently designed legs, which move in their own distinct way.
- Let the fun begin!
- dimensions: 120 x 150 x 85mm (length feelers : 40mm) / 4.7 x 5.9 x 3.3" (feelers length: 1.6")

KSR6

KSR5 "scarab" robot kit

Scarab is a robot that uses 2 touch sensors to detect obstacles.

- When its antennas (touch sensor) detect an obstacle, Scarab will first step back and then automatically execute a two-step manoeuvre to avoid the obstacle.
- The manoeuvre is a combination of "left turn", "right turn", "reverse" or "stop".
- The Scarab Robot can be configured with different sets of movements.
- The Kit comes complete with 2 sets of differently designed legs, which move in their own distinct way.
- Let the fun begin!
- recommended age: 14+
- dimensions: 175 x 145 x 85mm / 6.9 x 5.7 x 3.3"



KSR5

KNS7 Gearbox 2 in 1

use the contents of this set to change the speed of your existing sets. contains: motor, 2 set gears, metal shafts, gearbox and other accessories

- powered by: 2 x AA batteries (not included)

KNS7

Horizon Fuel Cell Technologies

KNS13 Bio-energy discovery kit

This kit demonstrates the latest in fuel cell technology using ethanol as its fuel source.

- Current fuel cells use hydrogen or methanol as fuel.
- This fuel cell kit directly converts ethanol (alcohol) to electricity silently and without any combustion.
- The device runs non-stop for days, providing an amazing demonstration of next-generation fuel cell technology.
- Ethanol not included.

The device runs non-stop for days

KNS13

KNS12 Wind hydrogen education set

Learn about wind energy and create hydrogen from water.

- Experiment with clean energy and fuel cell technology.
- Power your own inventions using a small electric motor.
- Discover with this hydro-wind kit how to store renewable wind energy using hydrogen fuel cell technology, combining two of the world's most advanced clean energy technologies.
- This kit includes a wind turbine, a PEM reversible fuel cell, and a water-based hydrogen storage system encouraging users to explore the science step by step.
- The hydro-wind kit can be configured in different ways, and helps visualize the workings of clean energy principles from start to finish.

KNS12

Horizon Fuel Cell Technologies

These kits combine science, knowledge and fun for everyone

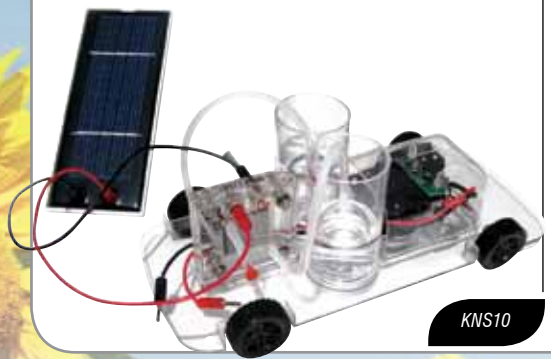
Scientists and researchers around the world have been looking to find new ways to meet our growing energy needs without further damaging our environment or endangering our planet.

Discover with these experiment kits how to create your own renewable energy using water, wind and a fuel cell or how to store green energy in a fuel cell.

KNS10 Fuel cell car science kit

This Fuel Cell Car Science Kit uses a reversible PEM fuel cell that combines electrolysis and power conversion into one single device.

- Watch as oxygen and hydrogen gases are formed in two transparent water containers.
- The car steers independently of the user once in operation: when the car hits a barrier, it will automatically find its way by reversing away 90 degrees.



KNS10

KNS11 H-racer 2.0 ir & hydrogen station kit

This futuristic hydrogen car science kit is an amazing way to demonstrate the use of cutting-edge alternative energy and automotive technologies.

- Its partly transparent body displays the inner mechanics of the car.
- The car's assembly instructions make it easy and fun to build, and also provides interesting education on real-world challenges.

KNS11

KNS9 Solar hydrogen education set

Discover how to produce, store and use the clean energy of the future! Using a process called electrolysis, water can be converted to hydrogen which is then transformed by fuel cells into electrical energy to power anything from vehicles to electronic devices.

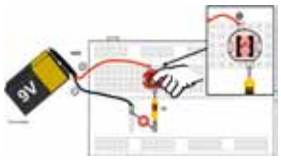
KNS9

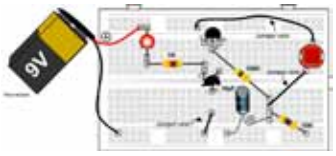
velleman® EDU -kit

EDUCATIONAL KITS

This experiment boxes provide a safe, cool and educational way to get familiar with the electronic circuits that form the basics of modern electronics.

DISCOVER THE WORLD OF ELECTRONICS



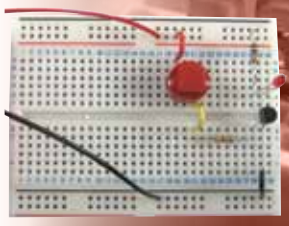


View Demo

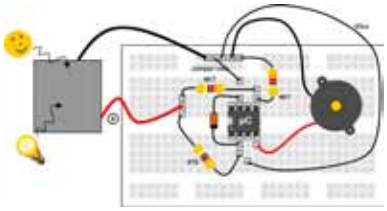
EDU01 Solderless educative starterkit

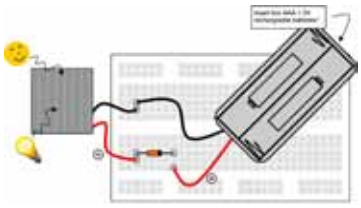
The EDU01 basic experiment kit is the first step into the world of modern electronics.

- Build your own circuits in a fun, safe and educative way.
- The kit contains a breadboard and all necessary components to get started right away.
- You will finish assembling your first circuit in just a few minutes…,Getting started
- what is in the box?
- part of our EDUKIT range. 10 exciting projects to build. no soldering required. high-quality breadboard with 456 contact terminals. extended manual. projects include: blinking LEDs, burglar alarm, light sensor, polarity tester, start-stop circuit, timer, running light, water alarm and more...



EDU01



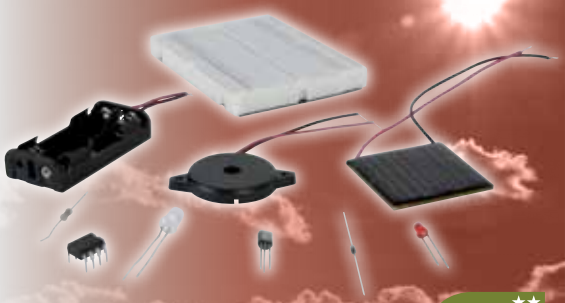


View Demo

EDU02 solar energy experiment kit

Solar Edukit: Fun solar powered projects.
Learn all about solar energy.

- part of our EDUKIT range
- clear instructions
- 10 exciting projects
- with micro controller
- HQ breadboard
- no soldering required!
- projects include:
  - solar led,
  - solar attention grabber,
  - solar cricket,
  - solar battery charger,
  - solar musical instrument,
  - IR remote tester,
  - solar garden light,
  - solar motion detector,
  - solar alarm simulator, ...



★★

EDU02

EDU03 Solder Educative Starter Box

Complete kit with soldering iron, tools, a variety of components and the necessary PCBs. Ideal to learn soldering. With convenient storage box.

EDU06 Oscilloscope Tutor kit

You have a scoop, but what can you do with it? This experiment kit teaches you the basics such as AC / DC setting, time base, volts per division, visualize various signals, measurements using markers, etc. .. Comes assembled, no soldering required.

EDU05 Usb tutor mounted

Make your first steps into the PC- USB world!
Using this tutor mounted, learning how to master USB communication with the outside world becomes simple.
Examples and tutorial in Microsoft Visual Basic, C++ & C# editions

see p.27

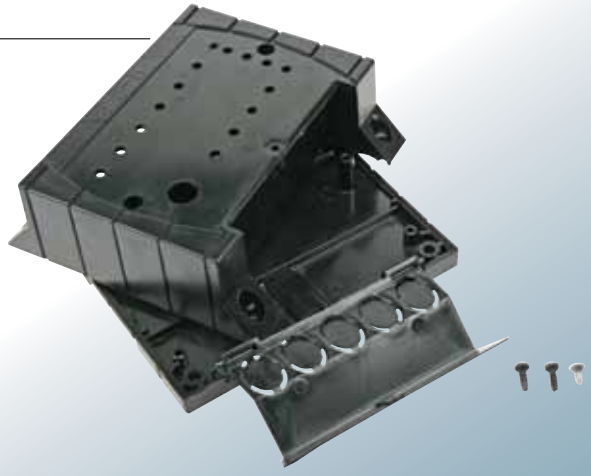
EDU05

VPB108 Velleman project box

Project box for various applications
Can be used for Velleman Kit projects or you own project.

suitable for Velleman: . multifunctional dimmer: K8028. AC power slave: K8034. video signal cleaner: K8036. 4 channel recorder / logger: K8047. 2 channel RF remote receiver: K8057. The enclosure can be used for Din rail mounting, or stand-alone. securable cover for connections. pre drilled holes for LED indicators

outside dimensions: 110 x 100 x 45mm
Max PCB dimensions: 100x75mm



VPB108

K/DIODE1 120 pcs diode set

quantity: 120 pieces. contents: . diodes. bridge rectifier

K/DIODE1

K/LEDHG Set with 50 green leds

K/LEDHG

K/LEDHR Set with 50 red leds

K/LEDHR

K/LED1 Set of 80 assorted leds

K/LED1

K/CAP1 Ceramic capacitor set

K/CAP1

K/CAP2 Electrolytic capacitor set

K/CAP2

K/RES-E12 Set of 610 resistors e12-series

K/RES-E12

K/RES-E3 Set of 480 resistors e3-series

K/RES-E3

K/TRANS1 Transistor set

- BC547B: ± 28
- BC557B: ± 28
- BC337: ± 12
- BC327: ± 12
- BC517: ± 6
- BC516: ± 6
- BD139: ± 4
- BD140: ± 4

K/TRANS1

Modules

The module versions are pre-mounted and tested and require no soldering.

VM106 Video signal cleaner module

Digitally cleans the video signal / removes unwanted distortion in video signal. Stabilises picture quality and luminance fluctuations.

- Improves picture quality on LCD monitors or projectors.
- S-video and composite video in- and output
- Led indication
- For pal / ntsc video.
- Warning: . Only use to make personal backup copies from original video material from which you are the rightful owner (dvd, vhs, vcd, ...).

kit version K8036: p15

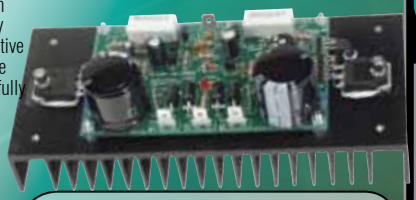
VM106

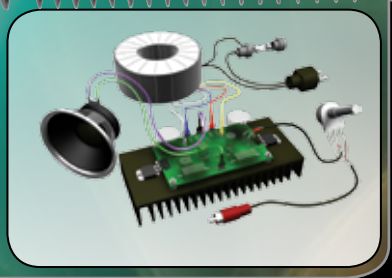
VM100 200w power amplifier module

Excellent value for money. Fully discrete design using epitaxial darlington transistors. Dc supply circuit on board with led indication. Ideal for active speaker system or subwoofer, guitar amp, home theatre systems, instrument amp, etc.. Comes fully adjusted and tested. Overload and short-circuit protection

200W music power @ 4 ohm load

- 100Wrms power @ 4 ohm load
- 70Wrms power @ 8 ohm load
- distortion: 0.02% @ 1KHz/10W
- damping factor: >800
- frequency response: 3Hz to 200KHz (-3dB)
- sensitivity: 0.6Vrms
- signal to noise ratio: 115dB
- power supply: 25-30Vac 120VA





kit version K8060: p16

VM100

RADIOACTIVITY MONITOR

VM200

Detects beta and gamma rays. Beep signal indicates presence of radiation. Number of beeps indicates relative strength of radiation. Compact and elegant enclosure with clip. Ideal for travel, incoming goods check, eduction, etc…

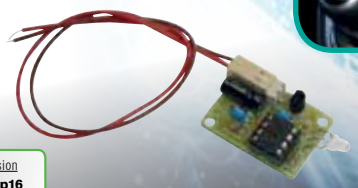
Geiger-müller counting tube: zp1310

- Background count: 2/min
- Power supply: 2xaaa battery (incl.)
- Power consumption:
- Standby: 20µa
- On: 0.3Ma, 25ma max.
- Dimensions: 160x26x24mm / 6.4X1x0.9"

VM200

VM189 12V car battery monitor

- This small circuit is of great value to check your car battery status. (enclosure not included!)
- Easy to build in. only 2 wires to connect
- Includes: board to wire connector
- dimensions: 30x20mm / 1.18 x 0.78" (board)



kit version MK189: p16

VM189

VM112 Personal animated badge

Great for parties, at the disco, advertisements, trade shows...

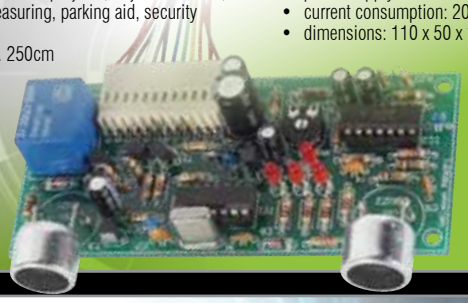
- create your own graphic animations on a badge. draw the animation using the supplied software and send the animations to the badge (using RS232). 8 animations of 25 frames can be stored in the badge and simply selected. adjustable animation speed. two brightness levels. sample animations supplied. package includes: . RS232 cable. manual. CD with movie editor software and examples. 1 x CR2032 battery
- power supply: 1 x 3.0V CR2032 battery (incl.)
- battery life: more then 50 hours
- dimensions: 80 x 48mm (3.1" x 1.9")

↕ 48mm
↔ 80mm

VM112

VM125 Ultrasonic radar module

- buzzer output: fast / slow / continuous
- distance indication with 3-LED-bar
- adjustable alarm distance
- LED alarm indicator
- dry contact NO/NC relay
- applications: robot projects, object detection, distance measuring, parking aid, security systems
- range: 20 ... 250cm
- frequency: 40kHz
- digital output: 5V (50mA max.)
- analogue output: 0...5V (5mA max)
- buzzer output: 12V (100mA max.)
- relay contacts: 1A low voltage NO/NC
- power supply: 12VDC
- current consumption: 200mA max.
- dimensions: 110 x 50 x 18mm / 4.3 x 2.0 x 0.7"



VM125

VM163 1a power supply module

LED display panel clock for universal use.
The clock features an "alarm" output and an option to turn off the display for "in car" or battery use.

↕ 40.5mm
↔ 67mm

1 ON-TIME & OFF-TIME

VM163

VM124 1a power supply module

just add a suitable transformer. Great to power your projects and save on batteries. use as adjustable power supply for experiments. control DC motors, low-voltage light bulbs…

min. output voltage: 1,2V

- max. output current: 1A
- max. output voltage: 30VDC
- dimensions: 52 x 30 x 35mm /
- 20,48 x 1,18 x 1,37"

kit version K1823: p29

VM124

VM135 Magical! dimmer module

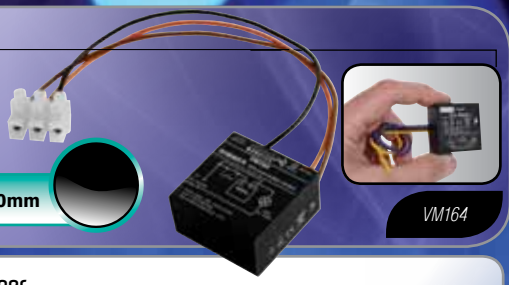
The Magical! Dimmer fits easily into your existing electrical wiring.
Just put in series with one of the lamp wires and you are set.

39x39x27mm

VM135

VM164 Mini dimmer

"This mini dimmer fits easily into your existing electrical wiring.
Just put in series and add one or more pushbuttons and you are set"
power supply: 220-240VAC/50Hz
- load: 40 to 200W max.



40x40x20mm

VM164

VM186 Low voltage led light organ

panel-mount concept: easy to build in. Hi-power output. built-in microphone. Adjustable sensitivity. blue indicator led. ideal for: . 12/24V RGB led strips. 12/24V single colour led strips. 12V halogen lamps. incandescent lamps. 12V led lamps. etc.... suited for in-car use
- power supply: 12-24VDC
- output: 5A max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

VM186

VM187 Low voltage led dimmer

panel-mount concept: easy to build in. Hi-power output. Adjustable level. blue indicator led. ideal for: . 12/24V RGB led strips. 12/24V single colour led strips. 12V halogen lamps. incandescent lamps. 12V led lamps. etc.... suited for in-car use
- power supply: 12-24VDC
- output: 5A max.
- dimensions: 100 x 40 x 35mm / 3.93 x 1.57 x 1.37"

VM187

VM101 Multifunctionele dimmer

This multifunctional dimmer was designed specifically for lighting control through a microprocessor. The device will automatically deactivate when the loads behaves too inductive.
- The multifunctional dimmer has 13 functions e.g.push button, regular dimmer, staircase light control, slow ON/OFF, interval timer, speed adjustment for fans, etc...
- AC power: 110 to 240VAC
- max. load: 2.5A (300W at 115VAC & 600W at 240Vac)
- dimensions: 106 x 101 x 44.5mm (4.2" x 4.0" x 1.75")

kit version
K8028: p21

VM101

VM152 Led dimmer with RF remote control

ideal for use with LED strips see our website. suited for incandescent lamps. automated Slow on / slow off effect mode selectable. learn up to 16 remotes. Hi power MOSFET output.
- power supply: 12-24VDC
- max load: 6A
- LED PWM frequency: +/- 300Hz
- dimensions: +/- 80x70x23mm

optional remote:
VM166T • p.40

optional • extra remote:
VM130T • p. 40

VM152

VM146 Rgb led strip effect generator

Ideal for use with flexible LED light strips.
- Multiply the output power of your Velleman LED controller with VM169
- Infosheet: LED controller selection guide
- suited for both incandescent bulbs and LEDs. RGB output: 3 x 3A

kit version
K8088: p22

VM146

VM161 Rgb led dimmer and color selector · to be used with um118r remote

For use with optional VM118R full size remote
- Ideal for use with common anode LED strips e.g.
- CHLS4RGB : FLEXIBLE WEATHERPROOF LED MODULE - RGB
- LDB1-HS3027AC : FLEXIBLE LED STRIP MODULE - RGB
- Multiply the output power of your Velleman LED controller with VM169

optional remote:
VM118R • p.40

VM161

VM150 Rgb led dimmer for din rail

- For use with: - 12-24VDC common anode RGB or single colour led strips
- - 12-24VDC led armatures
- Multiply the output power of your Velleman LED controller with VM169
- Infosheet: LED controller selection guide
- easy DIN-rail mounting. Hi-power outputs. Dual pushbutton operation. Press to select colour. Press to adjust intensity. Buttons can be paralleled. Single colour mode. Short circuit protection
- PWM freq.: 90Hz
- power supply: 12-24VDC (e.g. Velleman LPS series)
- Max output current: 5A /channel
- DIN-rail enclosure: 2 modules wide

VM150

VM151 Rgb led effect generator with RF remote control

Ideal for use with flexible LED light strips.
- 1 remote control "VM130T" included.
- Multiply the output power of your Velleman LED controller with VM169

REMOTE CONTROL
FROM PC:
K8074 • p.23

optional remote:
VM130T • p.40

VM151

VM162 Rgb led dimmer and color selector with RF remote

- Ideal for use with common anode LED strips e.g.
- CHLS4RGB : FLEXIBLE WEATHERPROOF LED MODULE - RGB
- LDB1-HS3027AC : FLEXIBLE LED STRIP MODULE - RGB
- 1 remote control "VM130T" included.
- Multiply the output power of your Velleman LED controller with VM169

optional remote:
VM130T • p.40

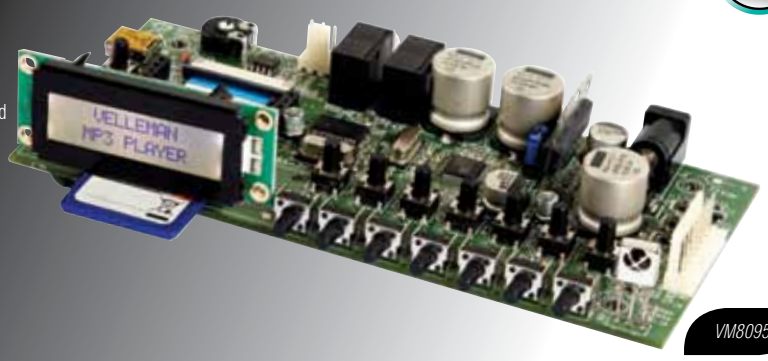
optional remote:
VM166T • p.40

VM162

MP3 PLAYER BOARD

VM8095

- suitable for SD and SDHC cards
- tested up to 32GB cards
- supports ID3 TAG information: Title, Artist Name, Album Name and Year are displayed on the 2-line 16 char. LCD
- supports folders to one level deep
- up to 1024 folders, each containing up to 16384 songs
- equalizer settings: Flat , Loudness, Heavy, Clear, Soft, Disco, Live and Hall
- decodes MP3 (MPEG 1.0 & 2.0 audio layer III (CBR, VBR, ABR), Till 320kbit/s. Fraunhofer IIS and Thomson licensed
- amplifier: 2x 5Wrms @ 4ohm
- power supply: 12Vdc/1A
- dimensions: 132 x 62mm / 5.2 x 2.45"



VM8095

VM120 10-channel 12vdc light effect generator

kit version K8044: p22

- 10 x 12V/400mA outputs to control cold-cathode fluorescent lamps (using FLPS adapter), light bulbs, LEDs and "solid state" relays, ...
- for use with advertisement lighting, party lights, eye-catchers, in the disco...
- ten pre-programmed light patterns selectable with a push button
- the number of used channels is adjustable
- the last used lighting effect is saved in non-volatile memory
- adjustable speed
- LED indication for every output
- 12V operation possible for use in cars
- power supply: 12V DC
- outputs: 12V DC / 400mA per channel (total : max 4A)
- dimensions PCB: 140 x 100 x 27mm (5.5" x 3.9" x 1.1")

VM120

VM169 RGB power slave module 3 x 4a

- add more led strips to your existing controller
- every unit adds up to 144W (12V) or 288W (24V)
- works with a single power supply or multiple supplies
- eases distribution of led strips
- allows simultaneous use of 12V and 24V strips
- only 4 interconnecting wires required (e.g. CHLWIRE).

ADDS POWER
TO +144W (12V)
OR +288W (24V)

VM169

VM156 Pocket audio generator

Great little gadget for service, repair, testing, education, etc... microprocessor technology. digital waveform generation

- sine wave: 50Hz, 100Hz, 1KHz, 10KHz, 20KHz
- burst: 50Hz, 100Hz, 1KHz
- burst mode: 20ms ON, 500ms OFF
- noise: 32-bit digital noise
- output level (10Kohm): 0 to 775mV (0dB)
- outputs: 2 x RCA (cinch)
- power supply: 2 x CR2016 or CR2025 battery (excl.)
- dimensions: 86 x 50 x 25mm / 3.4 x 2.0 x 1.0"

kit version K8065: p14

VM156

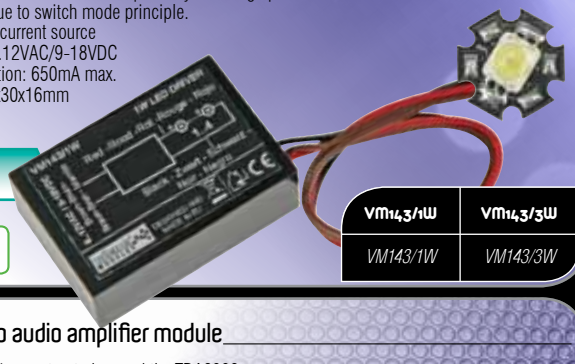
Driuermodule

VM143/1W Driver module for 1w leds

VM143/3W Driver module for 3w leds

Power up to four high-power LEDs (not incl.)

- delivers accurate constant current required by most high power leds.
- high efficiency due to switch mode principle. 350mA constant current source
- input voltage: 6..12VAC/9-18VDC
- power consumption: 650mA max.
- dimensions: 45x30x16mm / 1.7 x 1.2 x 0.6"



↕ 45mm
↔ 30mm

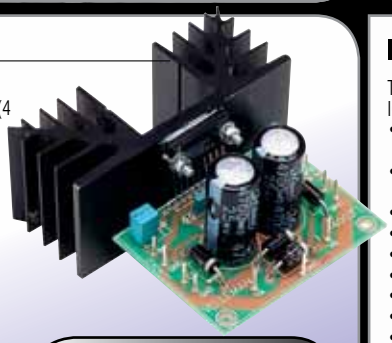
kit version K8071: p29

VM143/1W	VM143/3W
VM143/1W	VM143/3W

VM113 Stereo amplifier module 2 x 30w

This small amplifier is constructed with the TDA2616 IC, with a maximum supply capability of 2 x 15Wrms (4 ohm) of 2 x 10Wrms (8 ohm).

- The IC is thermally and short-circuit protected.
- Additional rectifier and smoothing filter are unnecessary, as alternating current can be directly connected to the unit.
- music power output: 2 x 30W / 4ohm
- RMS output: 2 x 15Wrms / 4ohm or 2 x 10Wrms / 8ohm
- total harmonic distortion: 0.07% (1W / 1kHz)
- channel separation: 70dB
- frequency response: 7Hz to 60kHz (-3dB)
- signal-to-noise ratio: 98dB (A-weighted)
- input sensitivity: 300mV / 150Kohm
- transient suppression on/off switch
- overload and short-circuit protection: max. 1h
- supply voltage: 2 x 12Vac / 2A (50W transfo recommended)
- dimensions: 70 x 50mm



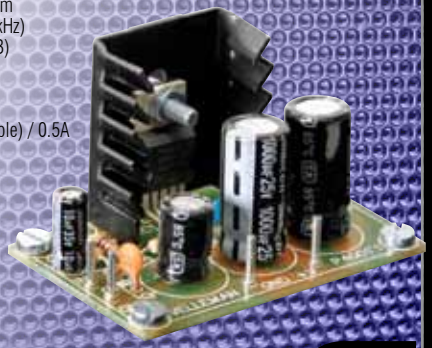
kit version K4003: p17

VM113

VM114 7w mono audio amplifier module

This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4ohms.

- The IC is completely thermally and short-circuit protected.
- A conventional direct current can be connected as supply.
- music power output: 7W / 4ohm
- output: 3.5Wrms / 4ohm or 2Wrms / 8ohm
- total harmonic distortion: 0.05% (1W / 1kHz)
- frequency response: 20Hz to 20kHz (-3dB)
- signal-to-noise ratio: 86dB (A weighted)
- input sensitivity: 40mV / 150Kohm
- overload and short-circuit protected
- supply voltage: 15Vdc (8 to 18Vdc possible) / 0.5A
- dimensions: 55 x 35mm (2.2" x 1.4")
- recommended transformer: 1150080M
- recommended adapter: PS1208



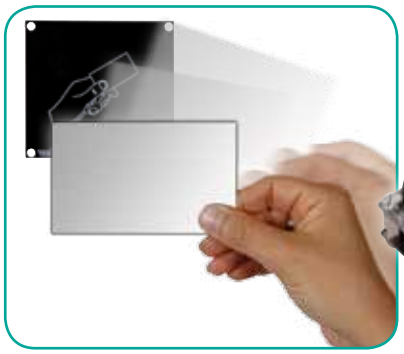
kit version K4001: p16

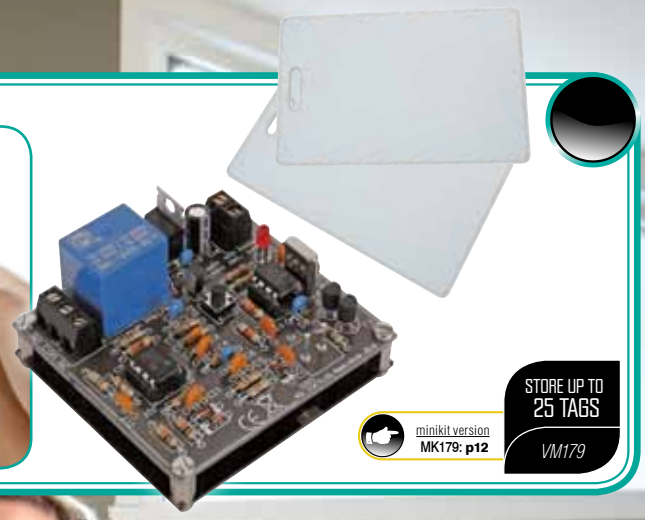
VM114

PROXIMITY CARD READER

VM179

store up to 25 tags. excellent security: 64-bit coded. Unlimited # of tags in low-security mode. two tags supplied (card-type). Easy addition and removal of tags. Output activation: 0.5s to 4min or toggle (ON/OFF). detection board can be mounted away from the main board (up to 5m) for higher security. applications: . open doors, fences, gates, etc.... arm/disarm security systems in homes / offices / vehicles etc.... Prevent unauthorised use of equipment, machinery, computer systems etc.... automate cat doors....





minikit version MK179: p12

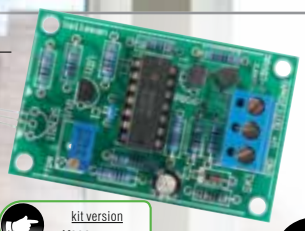
STORE UP TO 25 TAGS

VM179

VM132 Universal temperature sensor

measure indoor and outdoor temperatures. monitor heating and/or cooling of rooms, equipment, etc.... monitor temperatures in processes. put a temperature readout on your website. check your pools temperature...
range: -20°C (-4°F)... +70°C (+158°F)

- output: 0..20mA current loop
- output voltage compliance: 10V
- 3-wire system (GND, +V and OUT)
- power supply: 12VDC for 0..5V OUT / 15VDC for 0..10V OUT
- current consumption: 30mA max.
- dimensions: 55x35x15mm



kit version K8067: p19

VM132

VM137 Thermostat module 5 · 30°c · 41 · 86°f

Simple low-cost thermostat /temperature controller for various applications.

- temp. range: 5 to 30°C approx. (41 to 86°F)
- output relay with LED-indicator
- relay power rating: 3A normal open and normal closed contact
- power supply: 12VDC / 100mA
- hysteresis: 1°C (1.8°F)
- dimensions: 54 x 62 x 28mm / 2.1 x 2.4 x 1.1"

minikit version MK138: p12

VM137

VM145 Digital panel thermometer

non-volatile memory for minimum and maximum temperature. bright red LED read-out. pre-calibrated sensor. digital communication between sensor and display unit avoids measurement errors
wide power supply range: 9 ... 24VDC / 7 ... 17VAC

- temperature range: -30°C (-22°F) to + 120°C (248°F)
- current consumption: 40mA maximum
- dimensions:panel module: 67 x 40.5 mm / 2.6 x 1.6"

VM145

VM148 Panel thermostat module

general purpose panel mount thermostat. usable for heating or cooling purposes, (central heating, airco, incubator,…).
temperature range:

- °C: -18°C ~ + 60°C
- °F: 0°F ~ +146°F

- temperature resolution:
  - ± 0.5°C or ± 2°F
- accuracy: +/- 2°C, fine tune till +/- 0,5°C
- readout update interval: 1 second
- relay contact: NO - 3A (max. 230V)
- power supply: 9 - 12V DC
- power consumption: < 70mA
- dimensions:
- panel module: 67x40.5 mm / 2.6x1.6"
- cut-out: 54x37 mm / 2.1x1.5"
- mounting depth: 40mm / 1.6"

VM148

VM147 Panel counter module

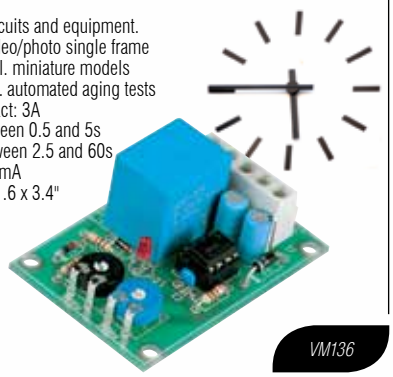
very practical for counting parts, people, scorekeeping, ... red LED read-out. 2 inputs: counts up or down. counting through external pulses or push buttons. memory function constantly compares the current value with a preset value and activates an output for as long as both are equal or for an adjustable time
power consumption: < 50mA

VM147

VM136 Interval timer module

General purpose pulse - pause timer for various interval timer automations
For intermittent operation of circuits and equipment. blinking light, warning light. video/photo single frame shooting. slide projector control. miniature models applications. automated testing. automated aging tests
output relay with NO / NC contact: 3A

- pulse time adjustable: between 0.5 and 5s
- pause time adjustable: between 2.5 and 60s
- power supply: 12Vdc / 100mA
- dimensions: 40 x 85mm / 1.6 x 3.4"



minikit version MK111: p3

VM136

VM141 Start-stop timer · 1s · 60h

- wide timing range. easy time setting. LED animation during operation. on-board START-STOP buttons. non retriggerable. power-on trigger is possible. debounced buffered inputs avoid false triggering. compact size. front panel mountable
- adjustable delay: 1s - 60h
- power supply: 12VDC / 100mA
- NO/NC relay: 24VAC/DC 3A max.
- dimensions: 70 x 45 x 20mm / 2.8 x 1.8 x 0.8"

VM141

Economy and safety timer

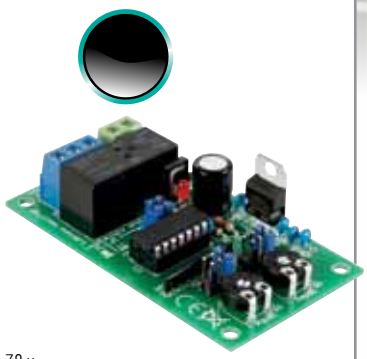
VM153EU french type plug
VM153EUS german type plug

You drive off to work or you are on your way to your favourite holidays destination and you wonder: Did I turn off my heating or my coffee machine?
With this very simple-to-use timer, the wondering is over!
activates and deactivates electric appliances. switching times: 15min- 30min- 1h - 2h - 4h - 8h - 16h & random. single button operation.

VM153EU

VM188 1s - 60u puls/pauze-timer

- wide timing range
- easy time setting
- start with:
  - 'pulse'
  - 'pause'
- single shot
- loop
- applications:
  - blinking of lights
  - pulsed operation of buzzers
  - automatic irrigation
  - lawn sprinklers
  - toilet flushing or ventilation
  - battery charging time control
  - cyclic operation of equipment
- power supply: 12-24VDC
- relay output: 16A/230VAC max.
- dimensions: 80x45x22 mm / 3.15 x 1.78 x 0.86"



VM153EU

VM133 Energy sauer module

Ever forgot to turn off the light or other appliance ?
With this unit no more worries; It will always turn off your light or small appliance.
Just install it between the wires and it is set!
Different timers can be selected.
automatically turns off your light or small appliance. different timers selectable.
LED power / timer indication. easy installation
input voltage: 110 to 230VAC

- maximum output: 500W (250W inductive load)
- selectable timers: 1h, 2h, 4h or 8h
- dimensions: 80 x 70 x 25mm / 3.16 x 2.77 x 0.98"

VM133

VM154 Fan timer

Easy dipswitch setting for all functions.
applications possibilities: . Selectable turn-ON & turn-OFF timer. Turn-ON timer only
power supply: 230VAC

- times:
- Turn-ON: approx 3 min
- Turn-OFF: 7/15 min approx.
- Max load: 3A
- dimensions: ± 80x70x23mm / 3.15 x 2.75 x 0.9"

VM154

VM131 Dimmer module for electronic transformer

Dimming electronic transformers impossible? Not if you have this unit! A processor controlled circuit outputs a wave form that is suited for most dimmable electronic transformers.

- Can also be used for direct mains voltage lamps.
- LED status indication. last dim setting memory. soft start for increased lamp life. suppression of radio & TV interference. suitable for incandescent lamps, mains voltage halogen lighting and low voltage halogen lighting in combination with an electronic transformer. Velleman transformer types: HET60N (60W), HET105N (105W)
- operating voltage: 110-125V or 220-240V AC (50/60Hz)
- maximum load: 300W/230V, 0-98% adjustable
- ambient temperature: 5 - 35°C
- dimming cycle speed: +/- 5 sec.
- dimensions: 80x70x25mm / 3.15 x 2.75 x 0.98"

kit version K8068: p20

VM131

VM144 Telephone ring detector with relay output

- simply connect in parallel with phone line
- powerful led flashes when phone rings
- the unit will feature a relay output if connected to a 12VDC power supply

kit version K8086: p19

VM144

4-CHANNEL RF REMOTE CONTROL SET

VM160

- Can be used as remote or codelock security receiver/transmitter
- 4 independent relay contacts, 3A each
- various timer possibilities per channel
- power supply: 230Vac
- open field range of up to 30m possible

VM160DT 4-channel desktop transmitter

Up to four remote channels are easily accessible from your desk!

VM130 2-channel RF remote control set

- two relay contact outputs
- store up to 31 transmitters
- toggle or pulse function selectable per output
- LED indicators for: output, power and timer function
- selectable internal heating resistor for cold environments
- power supply: 9 to 13Vac or 10 to 15Vdc
- consumption : 130mA max. / 20mA standby (heating off)
- relay contacts NO / NC: 5A each

VM160T 4-channel transmitter

Hand held remote control and codelock transmitter.

- 4 channels under your thumb!

VM160T

VM130T Optional remote

- generates unique 32-bit code
- more than 1.000.000.000 unique codes
- code can easily be changed for safety purposes
- choose continuous or 'burst' transmission
- LED - transmit indicator
- limited compatibility with older K6706 - K6706A - K6706B/G
- R&TTE compliant (ETS 300-220) (approved only for EU countries).

VM118 8-channel RF remote control set

8-channel RF remote control set. latching or momentary mode for each output. 8 addresses allow the use of multiple receivers. 'All clear'- function. open field range up to 50m / 165ft.. optional extra transmitter type VM118R. suited for all kinds of applications such as light control, audio speaker selection, garden applications ...

TRANSMITTER:

- power supply: 3 AAA batteries (not incl.)
- 8 digitally encoded channels
- dimensions: 150x58x23mm

RELAY RECEIVER CARD:

- 8 high-quality relay contacts, 5A/230Vac max.
- relay outputs are transient suppressed using VDR's
- LED confirmation on each relay contact
- input power: 12Vac / 500mA
- recommended housing: B8006

VM166T 2 channel transmitter with led light

A combination of remote control transmitter and LED light in one!

- very small
- bright LED
- generates unique 32-bit code
- more than 1,000,000,000 unique codes
- LED-transmit indicator
- power supply: 6V-battery type GP11GAC (incl.)
- 433MHz
- 46 x 33 x 14mm

VM119 One channel dual output receiver

Using multiple receivers of this type in combination with our 8 channel transmitter, will allow you to control remotely up to 8 devices at different places.

VM118R 8-channel RF remote transmitter

8 addresses allow the use of multiple receivers. 'all clear'- function. open-field range up to 50m / 165ft.. toggle or momentary mode for each key

VM139 IR remote checker module

the easy way to check your IR remote for proper operation. simple operation. point the remote at the sensor and push any button. 4 flashing LEDs indicate remote operation. low power consumption

power supply: 9V battery (not incl.)

- dimensions (W x D x T): 55 x 30 x 33mm / 2.2 x 1.2 x 1.32"

VM121 15-channel ir transmitter

works together with the VM122 15-channel receiver. allows the use of multiple receivers in one room

power supply: 3 AAA batteries (not incl.)

- up to 15 channels can be operated
- rubber keypad
- LED function indication
- also compatible with most Velleman IR receiver kits
- range transmitter - receiver: up to 20m

VM122 15-channel ir receiver

works together with our VM121 transmitter. 4 different output modes. 15 independent outputs. 15 radio (rotary simulation) outputs. 7 independent outputs & 8 rotary outputs. 7 rotary outputs & 8 rotary outputs (independent from each other). allows the use of multiple receivers in one room

power supply: 8 -14VDC or 2x6 to 2x12VAC (150mA)

- 15 open collector contacts: max. 50V/50mA
- transmitter - receiver range: up to 20m
- current consumption:
- all outputs off: 10mA
- all outputs on: 150mA

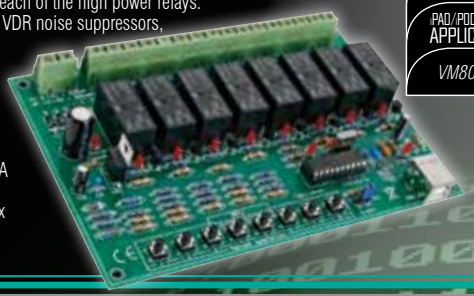
8-CHANNEL USB RELAY CARD

VM8090

Use your computer USB port to connect to the outside world
Connect up to 16A to each of the high power relays.
Comes complete with VDR noise suppressors,

kit version K8090: p26

16A/ HIGH-POWER RELAY
USB
PAD/PDD/PHONE APPLICATION
VM8090

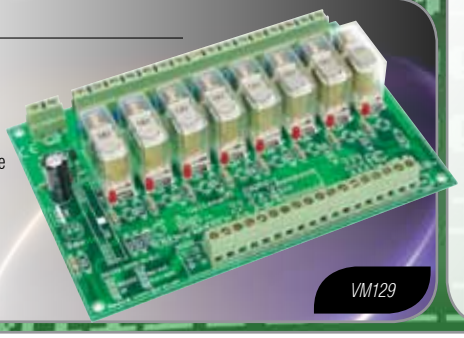


- power supply for relays: 9-10Vac or 12 to 14Vdc (500mA), example: PS1205
- 8 high-power relays: 16A each (resistive load)
- dimensions: 160 x 107 x 30mm / 6.3 x 4.2 x 1.2"

VM129 8-channel relay card

The purpose of this card is to convert electronic outputs or contacts to relay contacts.

- This results in a practical isolation between load and driving circuit.
- Ideal for use with our computer interface card VM110 or infrared remote control receiver VM122.
- The card features high grade input and output connectors.
- power supply: 12Vac / 500mA (including 12V output)



VM129

VM110N Usb interface card

The VM110N interface board has 5 digital input channels and 8 digital output channels.

- In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution.
- The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors.

USB

VM110N

VM140 Extended USB interface board

This computer interface board has a total of 33 inputs /outputs, including analogue /digital and a PWM output.

- The connection to the computer via the USB port is galvanically-optically isolated, so that damage to the computer is impossible thus providing a high level of secure implementation.
- All communication routines are contained in a Dynamic Link Library (DLL).
- You may write custom Windows* Applications in Borland Delphi, Borland C++ Builder, Microsoft Visual Basic, Microsoft VC or most other 32-bit Windows application development tool that supports calls to a DLL.

kit version K8061: p28

USB

VM140

VM138 Dmx-controlled relay

This module allows you to control a relay by means of the well-known DMX512 protocol.

kit version K8072: p22

VM138

VM116 Usb controlled dmx interface

this unit can control DMX fixtures using a PC and USB interface. test software and "DMX Light Player" software is included, a DLL is provided to write your own software. kit includes: . nice enclosure. USB cable. CD with: test software, DLL for own developments, free DMX light player.

kit version K8062: p22

USB

VM116

VM167 Mini USB interface board

"Use your PC to connect to the outside World"
Test software and examples downloadable via www.velleman.eu !
very Small, universal USB powered & controlled I/O board !. add USB interface to existing equipment. 15 inputs / outputs, including analogue inputs / digital inputs/outputs and PWM outputs. the number of inputs/ outputs can be further expanded by connecting two cards to the PC's USB connectors. all communication routines are contained in a Dynamic Link Library (DLL)

USB

VM167

VM142 Mini pic-plc application module

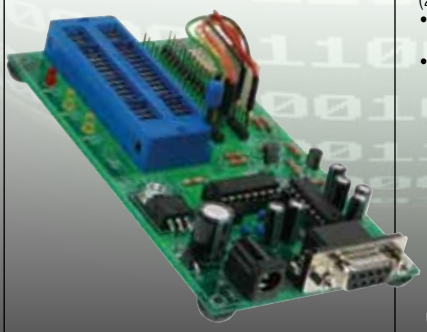
This application module may seem small but is big in performance - all depends on your programming skills.
Now you can create your own custom application without the hassle of making the hardware.

- All the buffered inputs and outputs are ready-made for you.
- The module features on-board LED, a relay output and a buzzer.
- Make your own automation, controller, car application…
- All you need is one of our programmers like vm134 or K8076

VM142

VM134 Pic™ programmer board

This board can program a wide range of Microchip® PIC™ microcontrollers
regularly updated list of microcontrollers through our web site. onboard configurable 40 pin. ZIF socket. easy to use programming PICprog2006™ software included. on board "In Circuit Serial Programming" connector.



kit version K8076: p27

VM134

VM111 Pic® programmer and experiment board

Suitable for programming Microchip® FLASH PIC(tm) microcontrollers.
supports 4 different 300 mil. PICs: 8p, 14p, 18p and 28p. test buttons and LED indicators to carry out educational experiments, such as the enclosed programming examples. easy connection to a PC through the serial port. enclosed is a Flash Microcontroller (PIC16F627) that can be reprogrammed up to 1000 times for experimenting at will. software to compile and program your source code is included
power supply: 12 or 15V DC, min. 300mA, non-regulated adapter (PS1205 / PS1208 / PS1508 (230Vac), PS1208USA (115Vac))

- IBM compatible PC, Pentium or better, with Windows™ 95/98/ME/NT/2000/XP, CDROM and a free serial RS232 port (cable included, e.g)
- dimensions: 145 x 100mm (5.8" x 4.0")

kit version K8048: p27

VM111

Instruments

THREE-IN-ONE LAB UNIT

LAB1

Your space saving lab solution! contents: 1 multimeter, 1 power supply & 1 soldering iron. this unit covers 99% of your home lab needs.

DC voltage: 200mV to 600V in 5 steps
- AC voltage: 200V and 600V
- DC current: 200µA to 10A in 5 steps
- resistance test: 200 ohm to 2Mohm
- diode, transistor and continuity test
- selectable output voltages: 3 - 4.5 - 6 - 7.5 - 9 - 12Vdc
- output: 1.5A (2A peak)
- LED overload indication
- low-voltage iron: 24V
- ceramic 48W heating element with temperature sensor
- temperature range: OFF - 150 - 450°C

perfect solution for starters or schools

THIS UNIT COVERS 99% OF YOUR HOME LAB NEEDS

LAB1

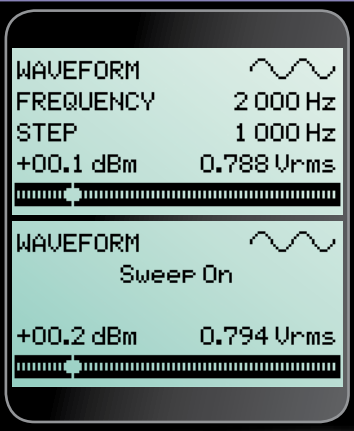
THREE-IN-ONE LAB UNIT

LAB2

This unique unit includes a digital oscilloscope, a digital function generator and a simple but easy-to-use power supply. The 3 units are electrically separated for ease of measurement.
- oscilloscope 40MS/s:
- bandwidth: up to 10 MHz (-3dB*)
- input range: 1mV to 20V/division in 14 steps
- input coupling: DC, AC and GND
- real-time sample rate up to 40MS/s
- AD resolution: 8 bits
- time base: 250ns to 1h per division
- auto set-up function
- probe x10 readout option
- readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (±2.5%)
- audio power measurement from 2 to 32 ohms
- max. 100Vp AC+DC (input 600Vp using x10 probe)
- standard 1M ohms 60MHz x1 - x10 probe (incl.)
- white LED backlight
- 1MHz function generator:
- DDS type generator (Direct Digital Synthesis)
- DAC resolution: 10 bits
- frequency range: from 1Hz to 1.000.000Hz (± 0.01%)
- frequency steps: 1Hz, 10Hz, 100Hz, 1kHz and 10kHz
- waveforms: sine, square and triangle
- sweep function with bi-direction option
- output voltage: max. 15Vpp
- real output level measurement: dBm / Vrms or Vpp readout (±3%)
- typical sine wave distortion (THD): < 0.1% @ 0dB / 600 ohms
- square wave rise/fall time: typ. 0.2µs
- output impedance: 50 ohms
- multi-language menu (Eng / Fre / Dut / Ge / Es)
- white LED backlight
- power supply:
- voltage output (fixed voltages): 3V, 5V, 6V, 9V, 12V (±5%)
- peak output current: 1A
- LED Output overload indicator
- LED Output ON indicator
- output ON/OFF switch

*: -4dB at: 1mV, 2mV, 5mV, 0.1V and 2mV

Measuring and testing just became easier



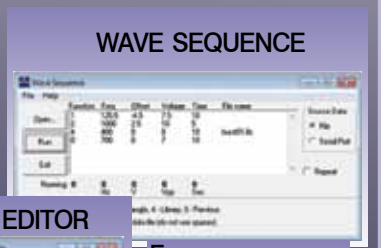
IN THE BOX: OSCILLOSCOPE PROBE, RCA-ADAPTOR, MANUAL, AC CORD

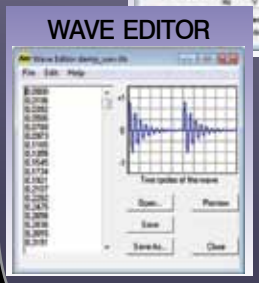
LAB2

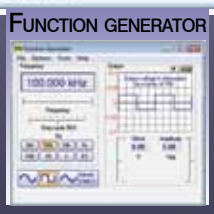
PCGU1000 2MHz USB PC function generator

The PCGU1000 is a digital function generator which can be connected with a PC via USB.
Standard signal waves like e.g. sine, triangle and rectangle are available; other sine waves can be easily created.

- frequency range: from 0.01Hz to 2MHz.
- TTL-level synchronisation output.
- stores up to 8192 of waveform points.
- you can create your own waveforms with the integrated signal wave editor.
- sweep frequency range 0.0001Hz to 25MHz.
- sweep time 1ms to 10 hours.
- extended bode plot option together with PC scope.
- automated wave sequence generation, using file or computer RS232 input..
- DLL available for custom software development.
- amplitude range: 100mVpp to 10Vpp @ 1KHz// 600ohm load / 0V offset
- sample rate: 50MHz
- power supply: standard 9V DC adapter, 600mA (included)





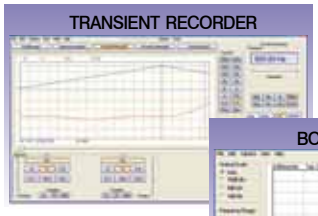


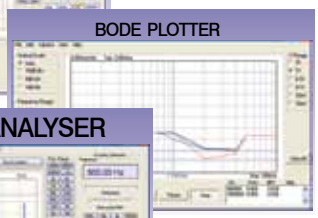
PCGU1000

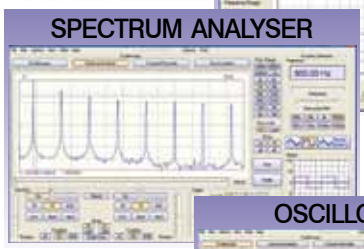
PCSGU250 Usb-pc scope + generator · 2ch.

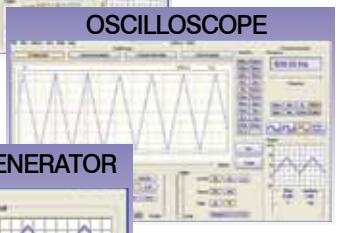
A complete USB-powered lab-in-a-box

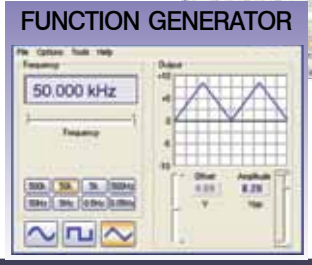
- With the generator, you can create your own waveforms using the integrated signal wave editor.
- For automated measurements, it is even possible to generate wave sequences, using file or computer RS232 input.









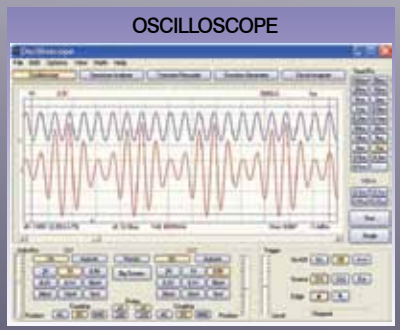


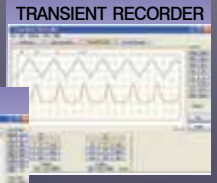
PCSGU250

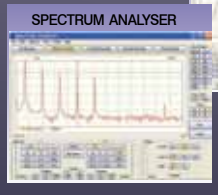
PCSU1000 Two-channel USB PC oscilloscope

The PCSU1000 digital storage oscilloscope uses the power of your PC to visualize electrical signals. Its high sensitive display resolution, down to 0.15mV, combined with a high bandwidth and a sampling frequency of up to 1GHz are giving this unit all the power you need.

- oscilloscope:
- time base: 20ns to 100ms per division.
- markers for: voltage and time/frequency.
- input range: 5mV to 2V/division.
- input sensitivity: 0.15mV display resolution.
- auto set-up function and X10 option.
- pre-trigger function.
- readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency….. record length: 4K samples / channel. real time sampling frequency: 1.25kHz to 50MHz.
- sampling frequency for Repetitive signals: 1GHz.
- spectrum analyser:
- frequency range: 0 .. 1.2kHz to 25MHz.
- linear or logarithmic timescale.
- FFT input channel: CH1 or CH2. zoom function.
- markers for amplitude and frequency.
- transient recorder:
- timescale: 20ms/Div to 2000s/Div.
- max record time: 9.4hour/screen.
- automatic storage of data.
- max. number of samples: 100/s.
- min. number of samples: 1 sample/20s.
- markers for time and amplitude.
- record and display of screens





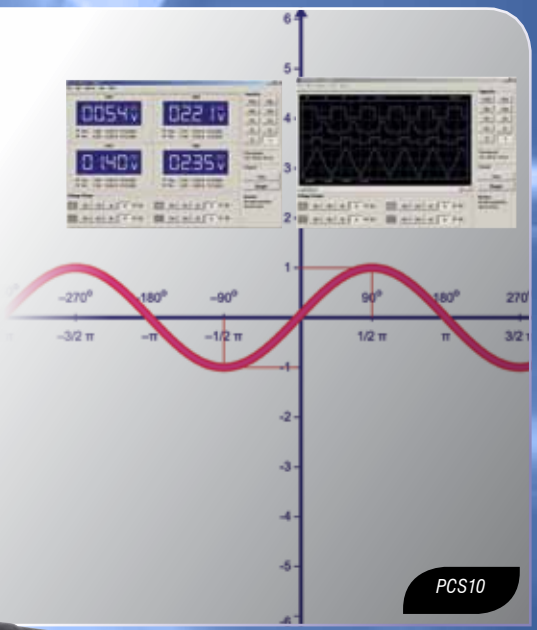


PCSU1000

PCS10 4-channel recorder / logger

record DC signals or slow-moving signals over very long periods. the measurements are automatically stored on your hard disk for further processing. thanks to the USB connection no power supply is necessary and installation is easy and straightforward. signals are instantly displayed on the PC screen using an analogue or DVM display.
hardware:

- USB connected and powered
- four DC-coupled input channels
- input resistance: 1Mohm
- maximum samples per second: 100
- four input ranges: 3V / 6V / 15V and 30V
- sensitivity: 10mV
- accuracy: ±3% of full scale
- maximum input: 30Vdc
- power and recording/diagnostic LED
- software:
- analogue trace or DVM readout
- 4 channels record simultaneously
- minimum / maximum sample hold function for DVM
- from 1 sec to 1000 sec per division
- storage and recall of screens (full colour) or data
- automatic recording option for long recordings
- on screen markers for time and voltage
- DLL included for your own developments

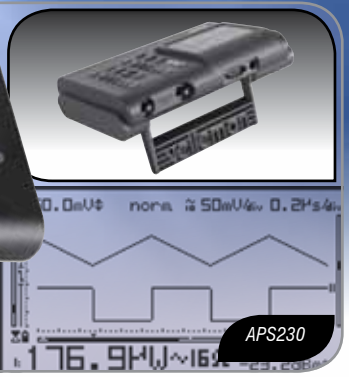


APS230 Advanced personal scope 240ms/s

2 input channels. high contrast LCD with white backlight. full auto set-up for volt/div and time/div. recorder roll mode, up to 170h per screen. trigger mode: run - normal - once - roll .... adjustable trigger level and slope. peak measurements: max, min. and pk to pk. measurements: rms, dB(rel), dBV, dBm and dBG. Direct Audio power measurements. x1 and x10 probe calculation option. several display modes. StereoScope mode for audio measurement. X and Y position shift. battery pack included, fast charge possible. in the box: . RS232 cable (9 pole sub D). 2 Insulated 60MHz X10 measuring probes. user manual. adaptor (110Vac 60Hz / 230Vac 50Hz). battery pack. Advance Personal Scope unit

- input impedance: 1 Mohm / 20pF
- bandwidth: 2 x 30MHz
- sampling: 240MS/s per channel
- step markers for voltage, time, ...
- vertical resolution: 8 bit
- sensitivity: min. 30µV
- volts per division: 1mV to 20V/div
- time base: from 25ns to 1 hr/div
- AC/DC input coupling selection
- RS232 communication with PC (PCUSB6 for USB connection in option)
- dimensions: 230 x 150 x 50mm / 9.1 x 5.9 x 2.0"

↕ 150mm
↔ 230mm



1MHZ FUNCTION GENERATOR

HPG1

A complete function generator in pocket format!
Now you can take test signals on the move, 3 waveforms can be selected.
Set the output voltage or frequency and select signal waveform using the on the screen menu.
A powerful sweep function is also included.

- DDS type generator (Direct Digital Synthesis)
- DAC resolution: 10 bits
- frequency range: from 1Hz to 1.000.000Hz (± 0.01%)
- frequency steps: 1Hz, 10Hz, 100Hz, 1kHz and 10kHz
- waveforms: sine, square and triangle
- sweep function with bi-direction option
- output voltage: max. 8Vpp
- real output level measurement: dBm / Vrms or Vpp readout (±3%)
- typical sine wave distortion (THD): < 0.1% @ 0dB / 600 ohms
- square wave rise/fall time: typ. 0.2µs
- output impedance: 50 ohms
- multi-language menu (Eng / Fre / Dut / Ge / Es)
- white LED backlight
- charging power supply: 9Vdc/200mA
- operates on NiMH rechargeable battery pack (included)
- dimensions: 74 x 114 x 29mm / 2.9 x 4.5 x 1.14"
- in the box:
  - handheld Pocket Generator
  - getting started manual
  - BNC adapter, BNC male to RCA female
  - BNC male to 2x 4mm banana plug
  - USB power supply adaptor

↕ 114mm
↔ 74mm

USB POWERED

Option
BAGPS

Option
CARSUSB1

SWEEP FUNCTION
DAC-RESOLUTION 10BITS
USB POWER SUPPLY
HPG1

HANDHELD POCKET SCOPE 40Ms/s

HPS140I

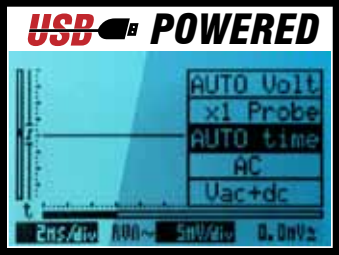
OUR BIGGEST SCOPE

Do not let its size fool you!
This Oscilloscope packs a lot of power in a tiny box.
Now you can really take a powerful oscilloscope everywhere.

- 40Mega samples/sec in real time
- bandwidth up to 10MHz
- sensitivity down to 0.1mV
- signal markers for amplitude and time
- direct audio power measurement
- USB battery charger included
- auto set-up function (or manual)
- readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (±2.5%)
- hold & store function
- white LED backlight
- operates on NiMH rechargeable battery pack (included)
- charging power supply: 9Vdc/200mA
- for use on CLASS II pollution degree II installations
- weight: 200g, (7oz)

↕ 114mm
↔ 74mm

USB POWERED



10MHz BANDWIDTH
SENSITIVITY 0.1mV
USB BATTERY CHARGER
HPS140I

HPS50 Handheld personal scope with usb

Designed By electronics enthusiasts For electronics enthusiasts! Powerful, compact and USB connectivity, this sums up the features of this oscilloscope.
The large keyboard and bright LCD makes this unit a breeze to use, combine this with great specifications and you wonder how you ever managed without it!

40 MHz sampling rate.
12 MHz analog bandwith.
0.1 mV sensitivity.
5mV to 20V/div in 12 steps. 50ns to 1 hour/div time base in 34 steps.
ultra fast full auto set up option. adjustable trigger level.
X and Y position signal shift.
DVM readout. audio, power calculation (rms and peak). dBm, dBV, DC, rms ... measurements.
signal markers for voltage and time.
frequency readout (through markers).
recorder function (roll mode). signal storage (2 memories).
high-resolution LCD 192x112 pixels.
LCD backlight.
galvanically separated USB output for PC. data or bitmap download to PC.
different screen modes. normal screen view. wide screen with DVM. normal screen with large DVM. wide screen with large DVM.
USB PC Connection real-time and screen capture. power supply:

- Li-ion battery: 7.4V / 1050mAh
- weight: 440g / 0,97 lbs
- dimensions: 110 x 175 x 40mm / 4.3 x 6.9 x 1.6"

USB

↕ 175mm
↔ 110mm

in the box:

HPS50

Coming soon...

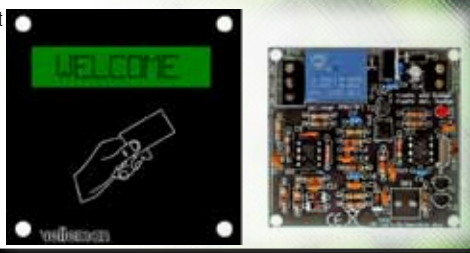
Images and information about these future products are subject to change.

velleman® INSTRUMENTS

velleman® HIGH-Q kit

K8019 Proximity card reader with LCD

Access control system with RFID tags.
With data reading via LCD.
Configuration through USB port



VM191 4-channel infrared transmitter

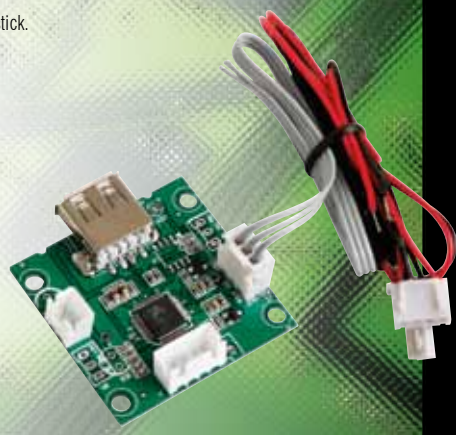
For use with:
- VM8095
- K8095
- K8050
- MK161

VM192RF RGB LED dimmer/ controller with RF remote control

VM192IR RGB LED dimmer/ controller with IR remote control

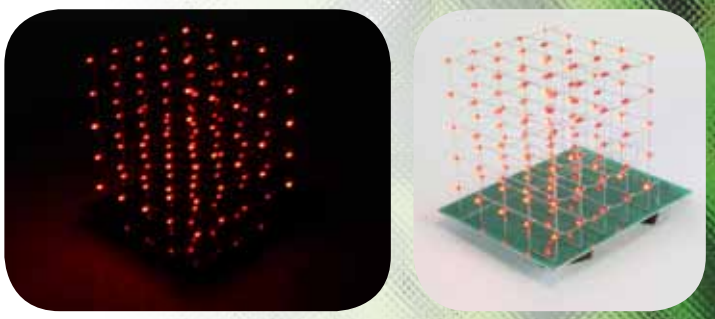
VM202 MP3 jukebox module

Plays back your mp3 files from a USB data stick.
Audio output: 500mV/47KOhm
3 bps Direct Drive
Power supply: 9Vdc/50mA max.



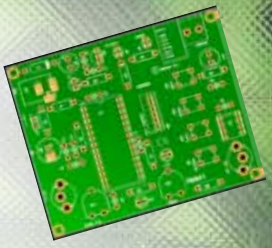
K8018 3D LED cube

125 LEDs – 3D LED cube
Configurable via USB and PC



K8094 Extended record / playback module

The K8094 allows you to record and play messages of up to 8 minutes long. Recording speed is continuously adjustable so that you can choose a perfect compromise between duration and sound quality. It also allows you to generate funny sound effects. Messages are retained in memory at power loss. The unit comes complete with microphone, line level in- and output and an output for a small speaker. Applications: Play messages in musea, stores, interactive installations, scale models, toys, as doorbell, gadget, etc…

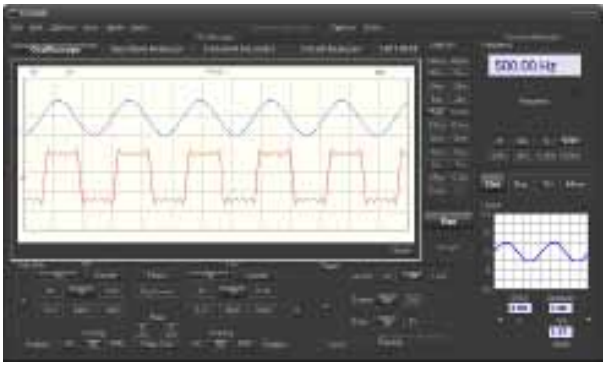


Coming soon...

SMALL DESIGN USB PC OSCILLOSCOPE AND SIGNAL GENERATOR

PCSU200

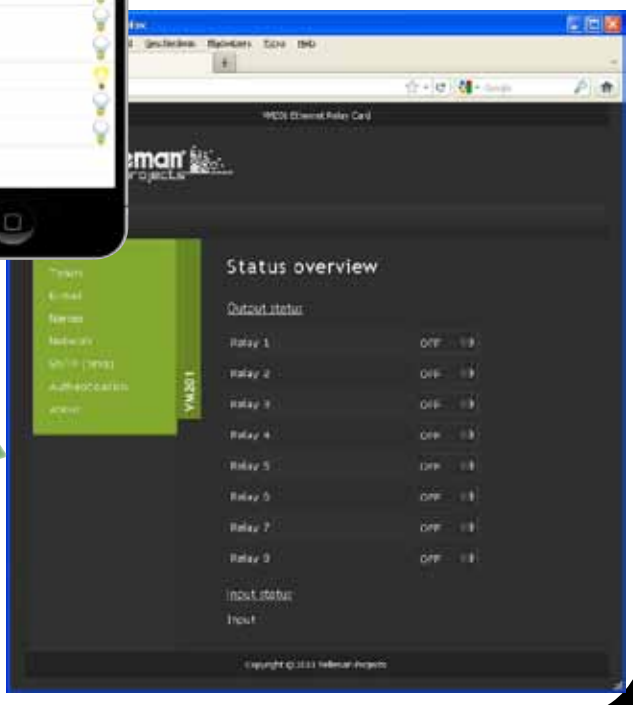
- 2x 12MHz oscilloscope, 25MS/s:
  - 10mV to 3V/div
  - 0.3mV sensitivity
  - 0.1μs to 500ms
- signal recorder:
  - automatic storage of data
  - 20ms/div to 9.4hour/div
- spectrum analyser:
  - 12MHz
  - Lin or Log time scale
- bode plot function:
  - 1kHz to 500kHz range
  - 10mV to 3V range



VM201 Network relay card with timers

- IEEE 802.3 compatible Ethernet controller
- supports 10 Base-T Port (10Mbps)
- web server with HTML support
- static IP or DHCP
- use SNTP time server as real time clock
- sends E-mail on input events
- timer programs for all 8 channels
- 8 relay channels : 16A/230Vac
- 1 input (dry contact or 2..20V voltage input)
- optional: Wi-Fi
- power supply: 12Vac or dc/500mA

iPhone • iPod • Android



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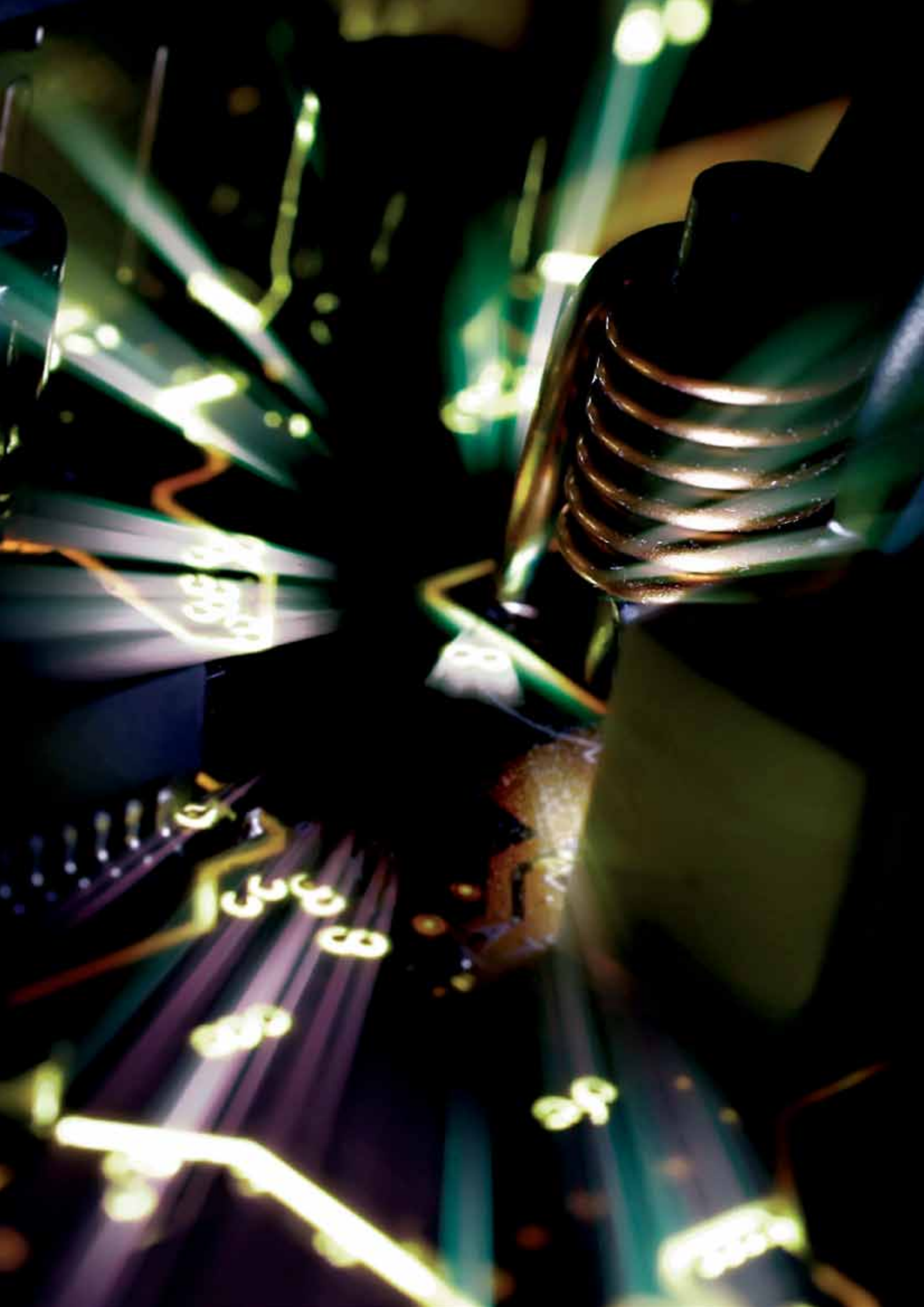

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